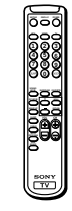
Self Diagnosis
Supported model

SERVICE MANUAL

BG-3R CHASSIS

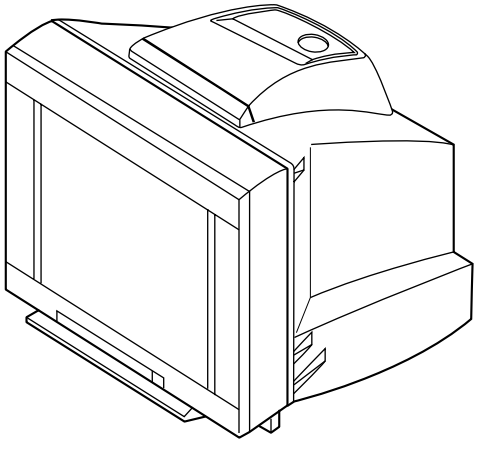
MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-XA25M60	RM-954	Thailand	SCC-U49F-A
KV-XA25M63	RM-954	Thailand	SCC-U49H-A
KV-XA25N90	RM-914	Taiwan	SCC-U54C-A

MODEL	COMMANDER	DEST.	CHASSIS NO.

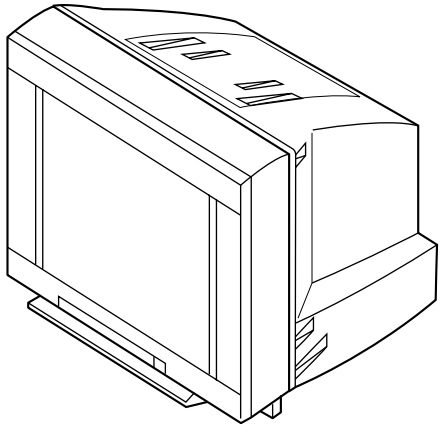


RM-914

RM-954



KV-XA25M63



KV-XA25M60/XA25N90

TRINITRON ® COLOR TV

SONY ®

SPECIFICATIONS
(KV-XA25M60/XA25M63)

		Note
Power requirements	220-240 V AC, 50/60 Hz	
Power consumption (W)	Indicated on the rear of the TV	
Television system	B/G, I, D/K, M	
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	
Stereo/Bilingual system	NICAM Stereo/Bilingual B/G, I, DK; A2 Stereo/Bilingual B/G	
Channel coverage		
B/G	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41	
I	UHF: B21 to B68 / CATV: S01 to S03, S1 to S41	
D/K	VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 CATV: Z1 to Z39, S01 to S03, S1 to S41	
M	VHF: A2 to A13 / UHF: A14 to A79 / CATV: A-8 to A-2, A to W+4, W+6 to W+84	
ㄱ (Antenna)	75-ohm external terminal	
Audio output (Speaker)	8W + 8W (TWEETER supplied)	KV-XA25M60
	6W + 6W	KV-XA25M63
3D WOOFER	15W	KV-XA25M63
Number of terminal		
(Video)	Input: 4* Output: 1 * Three input lines available	Phono jacks; 1 V_{P-P}, 75 ohms
♪ (Audio)	Input: 4* Output: 1 * Three input lines available	Phono jacks; 500 mVrms
(S Video)	Input: 2	Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
(Component Video)	Input: 1	Phono jacks Y : 1 Vp-p, 75 ohms, sync negative C_B : 0.7 Vp-p, 75 ohms C_R : 0.7 Vp-p, 75 ohms Audio : 500 mVrms
(Headphones)	Output: 1	Stereo minijack
Picture tube	25 inch	
Tube size	64	Measured diagonally
Screen size	60	Measured diagonally
Dimension (w/h/d, mm)	696 x 513 x 500	KV-XA25M60
	696 x 539 x 500	KV-XA25M63
Mass (kg)	38	KV-XA25M60
	40	KV-XA25M63

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SPECIFICATIONS
(KV-XA25N90)

		Note
Power requirements	110 V AC, 60 Hz	
Power consumption (W)	Indicated on the rear of the TV	
Television system	M	
Color system	NTSC3.58, PAL*, PAL 60*, SECAM*, NTSC4.43*	* AV IN ONLY
Stereo/Bilingual system	MTS	
Channel coverage		
M	VHF: 2 to 13 / UHF: 14 to 69 / CATV: 1 to 125	
(Antenna)	75-ohm external terminal	
Audio output (Speaker)	8W + 8W	
Number of terminal		
(Video)	Input: 4* Output: 1 * Three input lines available	Phono jacks; 1 V_{P-P}, 75 ohms
♪ (Audio)	Input: 4* Output: 1 * Three input lines available	Phono jacks; 500 mVrms
(S Video)	Input: 2	Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
(Component Video)	Input: 1	Phono jacks Y : 1 Vp-p, 75 ohms, sync negative C_B : 0.7 Vp-p, 75 ohms C_R : 0.7 Vp-p, 75 ohms Audio : 500 mVrms
(Headphones)	Output: 1	Stereo minijack
Picture tube	25 inch	
Tube size	64	Measured diagonally
Screen size	60	Measured diagonally
Dimension (w/h/d, mm)	696 x 513 x 500	
Mass (kg)	38	

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

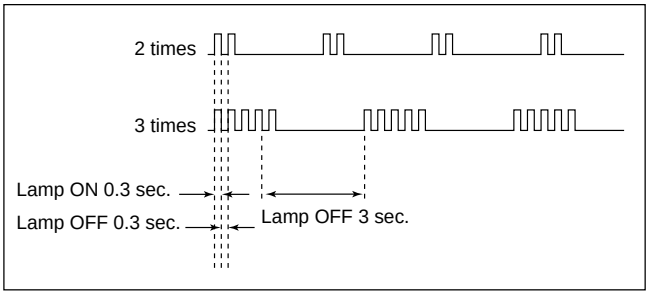
When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F4601 (F)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP) or overvoltage (OVP) • Vertical deflection stopped • Horizontal deflection overdrive	2 times	002:000 or 002:001~255 003:001~255 004:001~255 at the same time	• H.OUT Q511 is shorted. (A board) • Q701, Q702, Q703 is shorted (C6 board) • -13V is not supplied. (A board) • IC 503 faulty (A board)	• Power does not come on. • Load on power line is shorted. • Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
• White balance failure (no PICTURE)	5 times	005:000 or 005:001~225	• G2 is improperly adjusted. (Note 2) • CRT problem. • R(Q703), G(Q702) or B(Q701) out is faulty (C6 board) • IC301 is faulty. (A board) • No connection A board to C6 board.	• No raster is generated. • CRT cathode current detection reference pulse output is small.
• Micro reset	—	101:00 or 101:001~225	• Discharge CRT (C6 Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

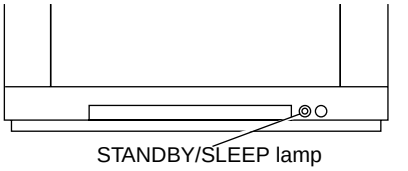
Note 1: If a + B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.
The symptom that is diagnosed first by the microcontroller is displayed on the screen.
Note 2: Refer to screen (G2) Adjustment in section 3-4 of this manual.
* R(Q703), G(Q702) or B(Q701) out is faulty (C6 board).

2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent/overvoltage Vertical deflection stopped	2 times
White balance failure	5 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

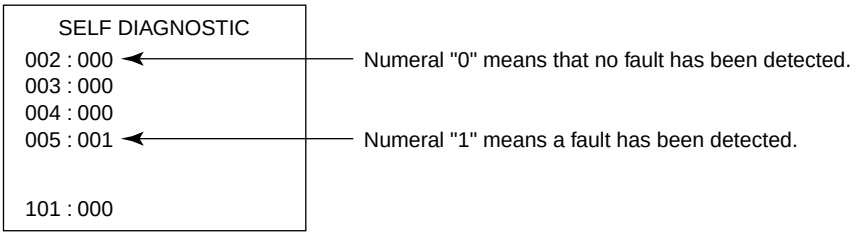
4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

[To Bring Up Screen Test]
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display ➡ channel 5 ➡ Sound volume - ➡ Power ON
⇧
Note that this differs from entering the service mode (mode volume +).

Self-Diagnosis screen display


SELF DIAGNOSTIC
002 : 000
003 : 000
004 : 000
005 : 001
101 : 000
Numeral "0" means that no fault has been detected.
Numeral "1" means a fault has been detected.

5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

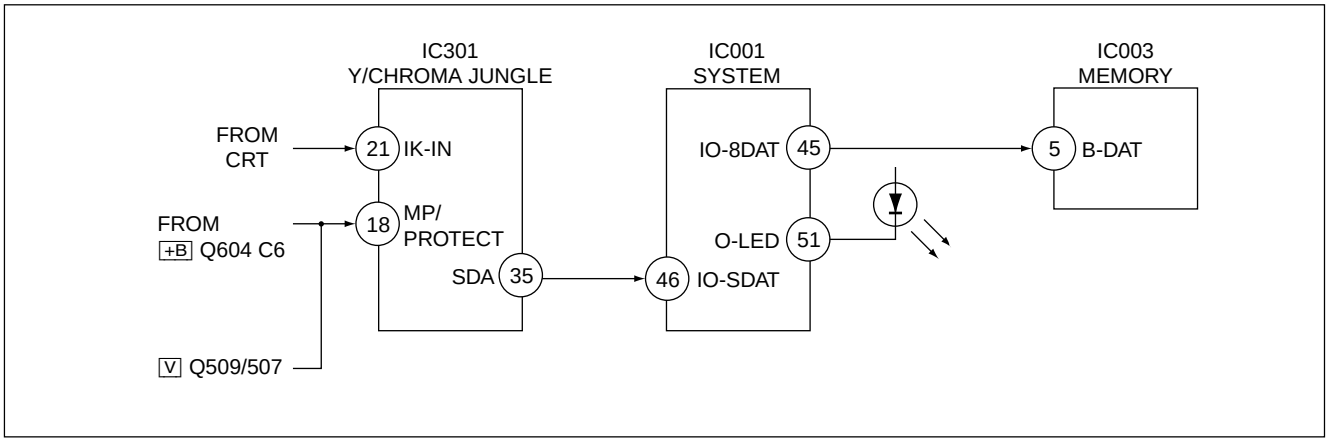
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]
To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT



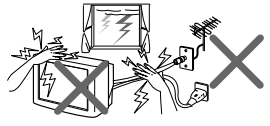
+B overcurrent (OCP)	Occurs when an overcurrent on the +B(135) line is detected by Q604. If Q604 go to ON and the voltage to pin 18 of IC301 should go down when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.
Vertical deflection stopped	Occurs when an absence of the vertical deflection pulse is detected by Q509 and IC001 shut down the power supply.
Vertical deflection overcurrent	Occurs when an overcurrent on V drive line is detected by Q507. Power supply will be shut down when detect this by IC001.
White balance failure	If the RGB levels* do not balance or become low level within 5 seconds, this error will be detected by IC301. TV will stay on, but there will be no picture. * (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1
GENERAL 1-2
(KV-XA25M60/XA25M63)

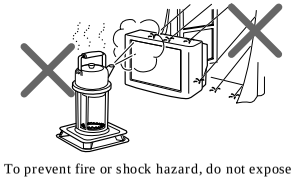
WARNING

- Dangerously high voltages are present inside the TV.
- TV operating voltage: 220 – 240 V AC.

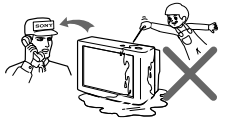


For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

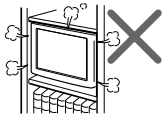
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



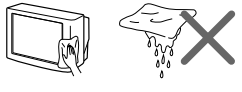
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



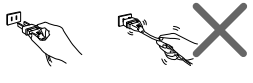
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



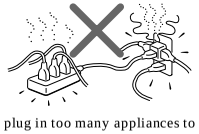
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



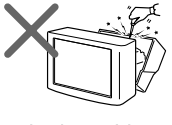
Clean the TV with a dry and soft cloth.
Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.



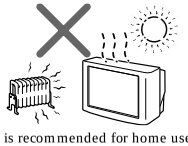
Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV before moving it or if you are not going to use it for several days.



Do not plug in too many appliances to the same power socket. Do not damage the power cord.

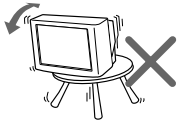


Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.

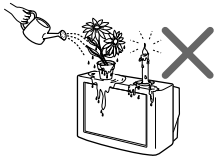


Your TV is recommended for home use only.
Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

WARNING (continued)



Do not install the TV in an unstable position.
Use a proper TV stand.



Do not place any objects on the TV.

Getting Started

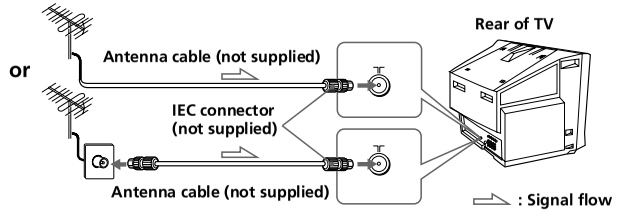
CAUTION

- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

Step 1

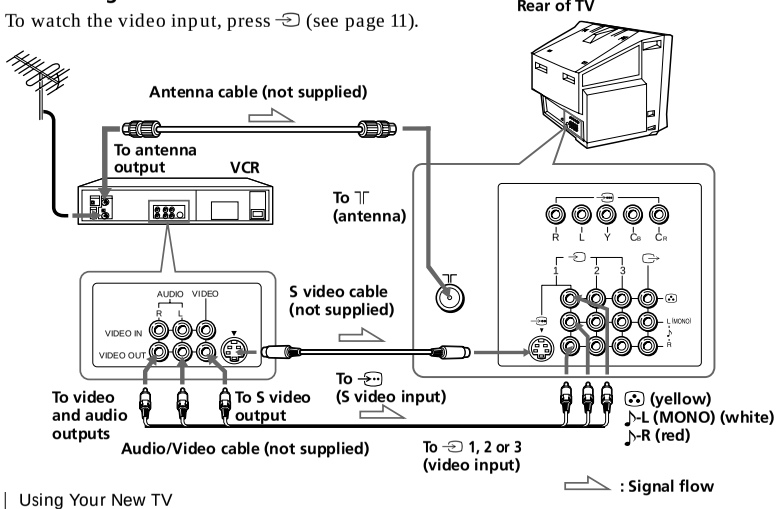
Connect the antenna

If you wish to connect a VCR, see the **Connecting a VCR** diagram below.



Connecting a VCR

To watch the video input, press ⊖ (see page 11).

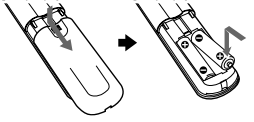


Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to ♪-L (MONO) (the white jack).
- If you connect a VCR to the (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- If both ⊖ (S video input) and ⊖ 1 (video input) at the rear of your TV are input at the same time, the ⊖ (S video input) is automatically selected. To view the video input to ⊖ 1 (video input), disconnect the S video cable.
- Do not connect video equipment to the ⊖ 3 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.
- When no signal is input from the connected video equipment, the TV screen becomes blue.

Step 2

Insert the batteries into the remote



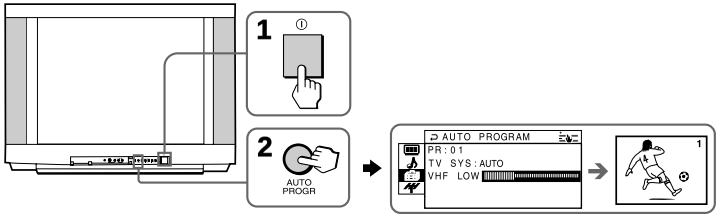
Note

- Do not use old batteries nor use different types of batteries together.

Step 3

Preset the channels automatically

Front of TV



Tips

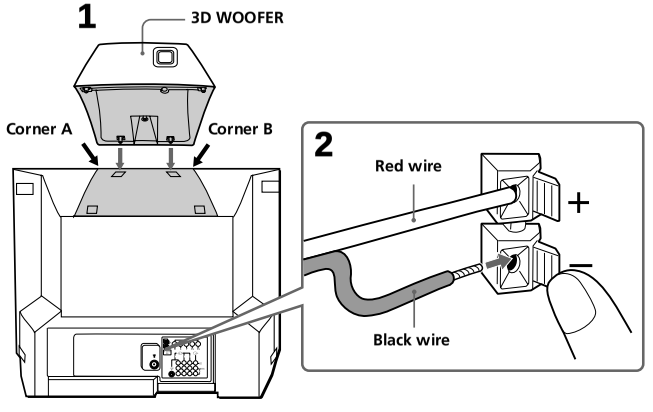
- If you want to stop the automatic channel presetting, press MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 27).

KV-XA25M60/XA25M63/XA25N90
RM-954 RM-914

Connecting the 3D WOOFER

(KV-XA25M63 only)

You can enjoy high quality sound by connecting the 3D WOOFER.



1 Align the front of the 3D WOOFER to corners A and B of your TV. Place the 3D WOOFER into the footholds and adjust it until it is stable.

2 Connect the wires to the 3D WOOFER (8Ω) terminals at the rear of your TV. The red wire should be connected to the ⊕ red terminal and the black wire to the ⊖ black terminal.

Notes

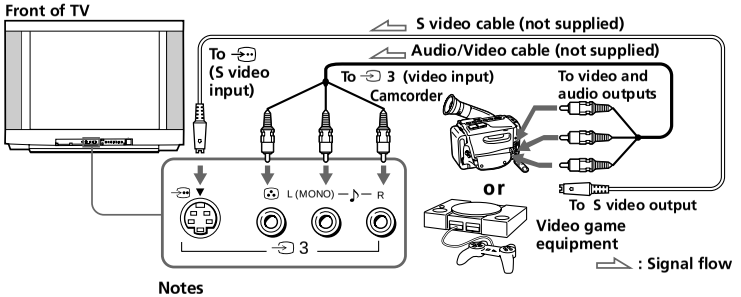
- Connect only the supplied 3D WOOFER; otherwise your TV may malfunction.
- Unplug your TV from the wall outlet when connecting the 3D WOOFER.
- To prevent a malfunction caused by a short circuit of the terminals, make sure that none of the 3D WOOFER wire strands stick out, making contact with the neighbouring speaker terminal.

Connecting optional components

You can connect optional audio / video components, such as a VCR, multi disc player, DVD, camcorder, video game or stereo system.

To watch the video input of the connected equipment, press ⊖ (see page 11).

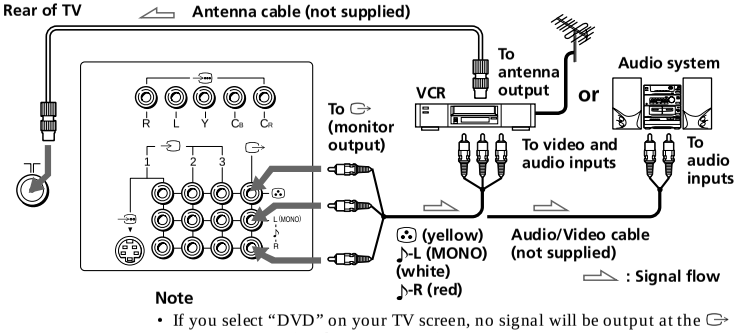
Connecting a camcorder/video game equipment using the ⊖ (video input) jacks



Notes

- You can also connect video equipment to the ⊖ 1 or 2 (video input) jacks at the rear of your TV.
- If both ⊖ (S video input) and ⊖ 3 (video input) at the front of your TV are input at the same time, the ⊖ (S video input) is automatically selected. To view the video input to ⊖ 3 (video input), disconnect the S video cable.
- Do not connect video equipment to the ⊖ 3 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

Connecting audio/video equipment using the ⊕ (monitor output) jacks



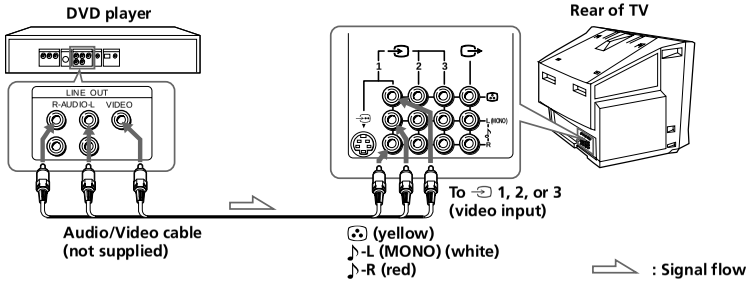
Note

- If you select "DVD" on your TV screen, no signal will be output at the ⊕ (monitor output) jacks (see page 11).

continued

Connecting Optional Components (continued)

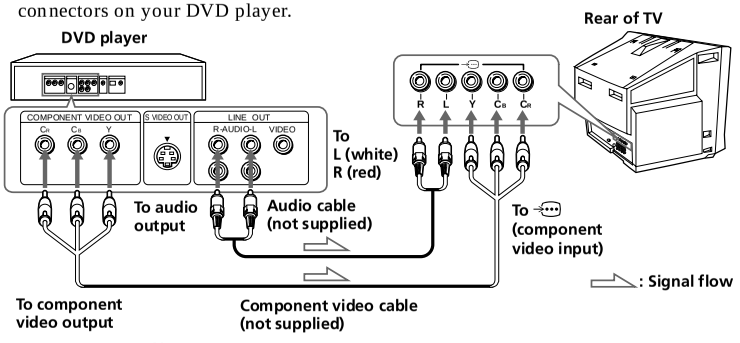
Connecting a DVD player using the (video input) jacks



Connecting a DVD player using the (component video input) jacks

1 Connect R and L under (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.

2 Using a component video cable, connect Y, C_B, and C_R under (component video input) on your TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.



Notes

- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B (blue)	C_b, B-Y or P_B
C_R (red)	C_r, R-Y or P_R

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness (“SHARP”) in the “ADJUST” menu of the “PICTURE MODE” menu (see page 21).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

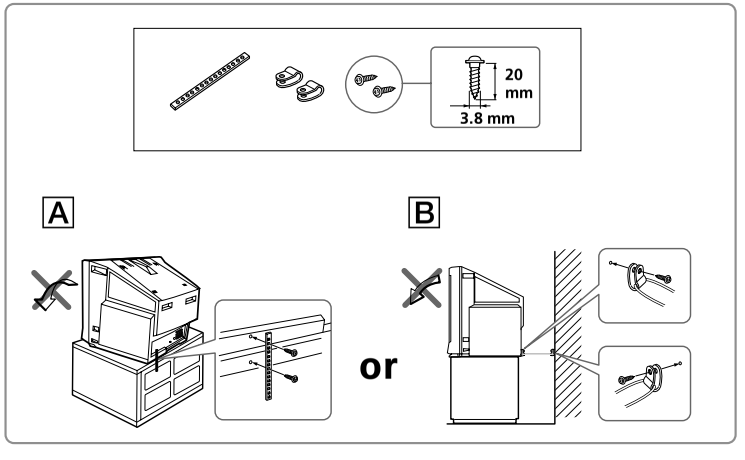
Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

A With the supplied screws, attach the band to the TV stand and to the rear of the TV using the provided hole.

or

B Put the cord or chain through the clamps to secure the TV against a wall or pillar.



Note

- Use only the supplied screws. Use of other screws may damage the TV.

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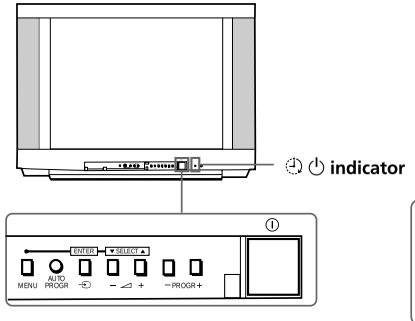
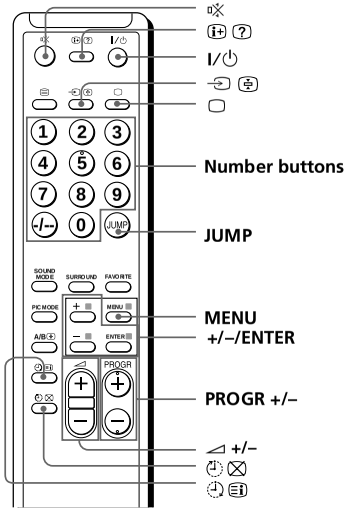
Watching the TV

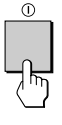
This section explains various functions and operations available while watching the TV. Most operations can be done using the remote.





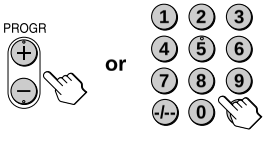
1 Press ⏻ to turn on the TV.

When the TV is in the standby mode (the ⏻ indicator on the TV is lit red), press I/⏻ on the remote or PROGR +/– on the TV.



2 Press PROGR +/– or number buttons to select the program number.

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).



To select a program number quickly

(1) Press and hold PROGR +/–.
(2) Release PROGR +/– when the desired program number appears.

Note

- When you select a program number quickly, the picture may be disrupted. This does not indicate a malfunction.

Additional tasks

To	Press
Turn off temporarily	I/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	⏻ on the TV.
Adjust the volume	+/–.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	⏎ to select “VIDEO 1”, “VIDEO 2” , “VIDEO 3” or “DVD”. To return to the TV program, press ▭ (or ⏎ on the TV).
Jump back to the previous program number	JUMP.
Display the on-screen information*	ⓘ+.

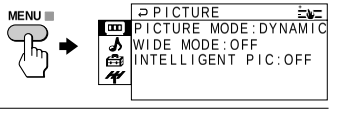
* The picture, sound, and either the program number or video input are displayed. The on-screen display for the picture and sound information disappears after about three seconds.

Changing the menu language

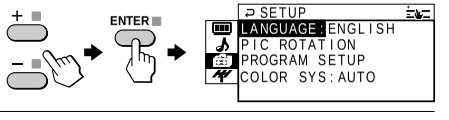
You can change the menu language as well as the on-screen language.

For details on how to use the menu, see **Introducing the menu system** on page 18.

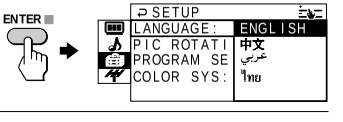
1 Press MENU.



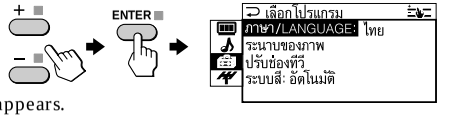
2 Press + or – to select the “SETUP” icon (🧰), then press ENTER.



3 Make sure “LANGUAGE” is selected, then press ENTER.



4 Press + or – to select the desired language (e.g, “ไทย”), then press ENTER.



The selected menu language appears.

To return to the normal screen

Press MENU.

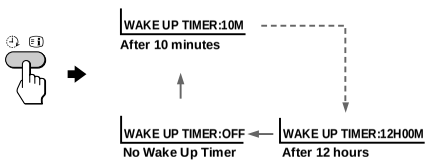
continued

Watching the TV (continued)

Setting the Wake Up timer

1 Press ◴ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the program number or video input you want to display when you wake up.

3 Press ⏻ or set the Sleep timer if you want the TV to turn off automatically.

The ◴ indicator on the TV lights up orange.

To cancel the Wake Up timer

Press ◴ until "WAKE UP TIMER: OFF" appears or turn off the TV's main power.

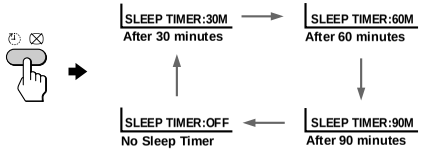
Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into the standby mode. To continue watching the TV, press any button or control on the TV or the remote.

Setting the Sleep timer

Press ◴ until the desired period of time appears.

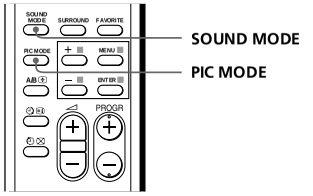
The Sleep timer starts immediately after you have set it.



To cancel the Sleep timer

Press ◴ until "SLEEP TIMER: OFF" appears or turn the TV off.

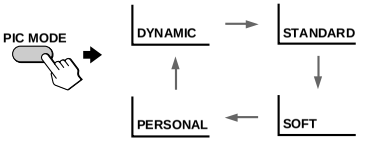
Selecting the picture and sound modes



You can select picture and sound modes and adjust the setting to your preference in "PERSONAL" option.

Selecting the picture mode

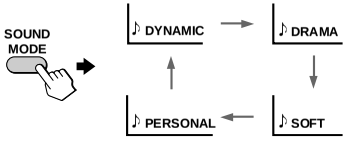
Press PIC MODE repeatedly until you get the desired picture mode.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal contrast pictures.
"SOFT"	receive mild pictures.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "PICTURE" menu (see page 20).

Selecting the sound mode

Press SOUND MODE repeatedly until you get the desired sound mode.



Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "SOUND" menu (see page 22).

Tip

- You can also set the picture and sound modes using the menu (see **Changing the "PICTURE" setting** on page 20 and **Changing the "SOUND" setting** on page 22).

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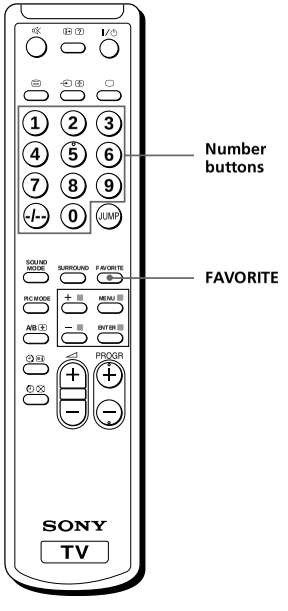
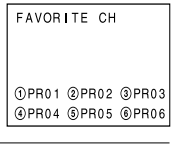
Viewing your favorite channels

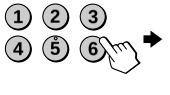
You can display and select six of your favorite channels directly from your TV screen.

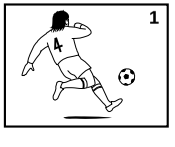


1 Press FAVORITE.



2 Press the number button from 1 to 6 to select the desired favorite channel.



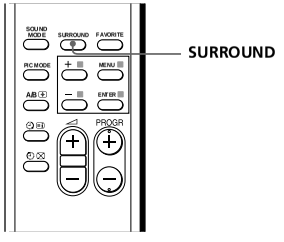


Tip

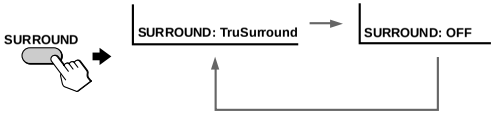
- To program your favorite channels, see **Adjusting each program number settings (PROGRAM SETUP)** on page 25.

Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"OFF"	turn off the surround sound.

Tip

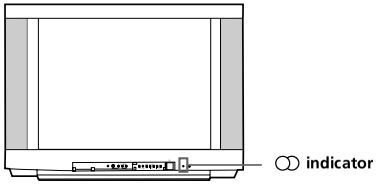
- You can also select the surround option using the menu (see **Changing the "SOUND" setting** on page 22).

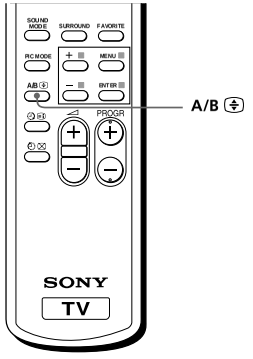
The surround of your TV is categorized as TruSurround.

TruSurround™ is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents.

Enjoying stereo or bilingual programs

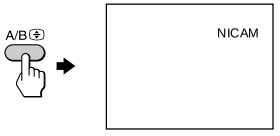
You can enjoy stereo sound or bilingual programs of NICAM and A2 stereo systems.





Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound. The ◌◌ indicator on the TV lights up red when receiving any stereo or bilingual program.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	NICAM (Stereo sound) → MONO (Regular sound)
NICAM bilingual	NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)
NICAM monaural	NICAM MAIN (Main sound) → MONO (Regular sound)

When receiving an A2 program

Broadcasting	On-screen display (Selected sound)
A2 stereo	MONO (Regular sound) → STEREO (Stereo sound)
A2 bilingual	MAIN (Main sound) → SUB (Sub sound)

Receiving area for NICAM and A2 programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.

If the sound is distorted when receiving a monaural program through the ⅂ (antenna) terminal

Press A / B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A / B again until "AUTO" appears on the screen.

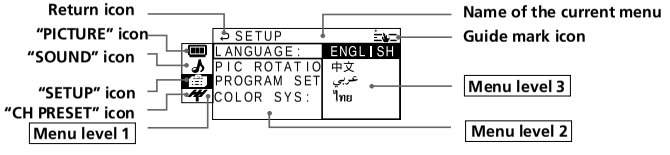
MONO → AUTO

Notes

- The "MONO" or "AUTO" setting is memorized for each program number.
- You cannot receive stereo broadcast signal when the TV is in the "MONO" setting. Normally set the TV to "AUTO".

Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. Here's an overview of the menu system.



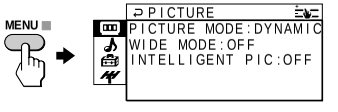
Level 1	Level 2	Level 3/Function
"PICTURE"	"PICTURE MODE"	Select the picture mode: "DYNAMIC"→ "STANDARD"→ "SOFT"→ "PERSONAL"→ "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR"→ "BRIGHT"→ "HUE"→ "SHARP"
	"WIDE MODE"	Change the picture size.
	"INTELLIGENT PIC"	Optimize picture quality.
"SOUND"	"SOUND MODE"	Select the sound mode: "DYNAMIC"→ "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE"→ "BALANCE"→ "BBE"*
	"SURROUND"	Select the surround mode: "TruSurround" → "OFF"
	"INTELLIGENT VOL"	Adjust volume automatically.
"SETUP"	"LANGUAGE"	Change the menu language: "ENGLISH" →"中文"(Chinese) → "عربي"(Arabic) → "ไทย" (Thai)
	"PIC ROTATION"	Rotate the picture.
	"PROGRAM SETUP"	Adjust each program number settings.
	"COLOR SYS"	Change the color system: "AUTO" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
"CH PRESET"	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"TV SYS"	Change the TV system: "B/G" → "I" → "D/K" → "M"

* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

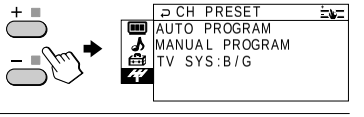
How to use the menu

You can use the buttons on the remote and on the TV as well to display the menu and adjust the settings.

1 Press MENU to display the menu.



2 Press + or – to select the desired item.



3 Press ENTER to confirm your selection and go to the next menu level.

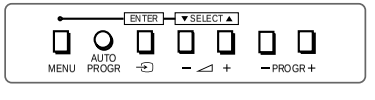
Other menu operations

To	Press
Adjust the setting value	+ / –
Return to the previous menu level	ENTER
Cancel the menu	MENU

Tips

- To return from Menu Level 2 to Menu Level 1, press + / – to select the return icon (⮌), then press ENTER.
- Some of the menu items can be operated directly using the remote buttons.
- The MENU, ENTER, and SELECT ▼/▲ buttons on the TV can also be used for the operations above.

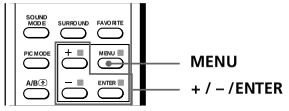
Front of TV



Note

- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

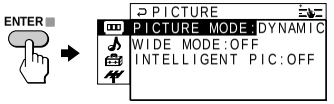
Changing the “PICTURE” setting



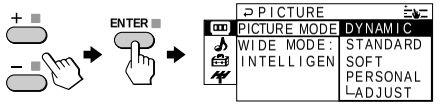
The “PICTURE” menu allows you to change the picture settings.

1 Press MENU.

2 Make sure the “PICTURE” icon ( ) is selected, then press ENTER.



3 Press + or – to select the desired item (e.g., “PICTURE MODE”), then press ENTER.



Select	To
“PICTURE MODE”	choose either “DYNAMIC”, “STANDARD”, “SOFT”, “PERSONAL”*, or “ADJUST”.
“WIDE MODE”	change the picture size when receiving wide-mode (16:9) picture signal. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.
“INTELLIGENT PIC”	optimize picture quality. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.

* When the “PERSONAL” mode is selected, you can receive the last adjusted picture settings from the “ADJUST” option (see page 21).

Note

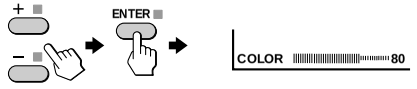
• For details on the options under “PICTURE MODE”, see page 13.

To return to the normal screen

Press MENU.

Adjusting the “ADJUST” items under “PICTURE MODE”

1 Press + or – to select the desired item (e.g., “COLOR”), then press ENTER.



2 Adjust the value according to the following table, then press ENTER.

For	Press – to	Press + to
“PICTURE”	decrease picture contrast	increase picture contrast
“COLOR”	decrease color intensity	increase color intensity
“BRIGHT”	darken the picture	brighten the picture
“HUE”*	increase red picture tones	increase green picture tones
“SHARP”	soften the picture	sharpen the picture

* You can adjust “HUE” for the NTSC color system only.

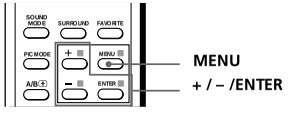
3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select “PERSONAL”.

Tip

• For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 18.

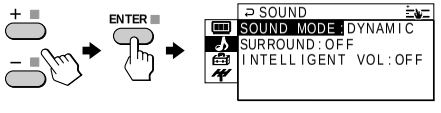
Changing the “SOUND” setting



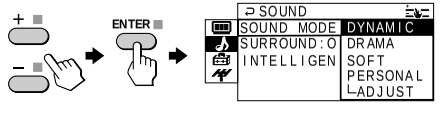
The “SOUND” menu allows you to change the sound settings.

1 Press MENU.

2 Press + or – to select the “SOUND” icon (♪), then press ENTER.



3 Press + or – to select the desired item (e.g., “SOUND MODE”), then press ENTER.



Select	To
“SOUND MODE”	choose either “DYNAMIC”, “DRAMA”, “SOFT”, “PERSONAL”*, or “ADJUST”.
“SURROUND”	choose either “TruSurround” or “OFF”.
“INTELLIGENT VOL”	adjust the volume of all program numbers and video inputs automatically. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.

* When the “PERSONAL” mode is selected, you can receive the last adjusted sound settings from the “ADJUST” option (see page 23).

Tip

- For details on the options under “SOUND MODE” and “SURROUND”, see pages 13 and 15 respectively.

To return to the normal screen

Press MENU.

Adjusting the “ADJUST” items under “SOUND MODE”

1 Press + or – to select the desired item (e.g., ”BALANCE“), then press ENTER.

2 Adjust the value according to the following table, then press ENTER.

For	Press – to	Press + to
“BASS”	decrease the bass	increase the bass
“TREBLE”	decrease the treble	increase the treble
“BALANCE”	increase the left speaker’s volume	increase the right speaker’s volume
“BBE”	select “HIGH” for higher enhancement of sound clarity; select “LOW” for lower enhancement of sound clarity; select “OFF” to turn off the BBE sound	

3 Repeat the above steps to adjust other items.

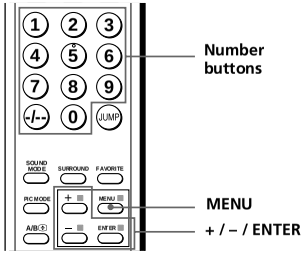
The adjusted settings will be received when you select “PERSONAL”.

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 18.

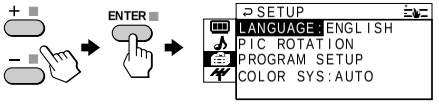
Changing the “SETUP” setting

The “SETUP” menu allows you to change the menu language, adjust the picture position, adjust the program number setting and select color system.

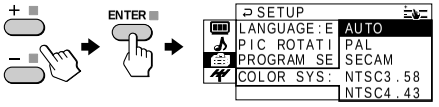


1 Press MENU.

2 Press + or – to select “SETUP” icon ( ), then press ENTER.



3 Press + or – to select the desired item (e.g., “COLOR SYS”), then press ENTER.



Select	To
“LANGUAGE”	change the menu language (see **Changing the menu language** on page 11).
“PIC ROTATION”	adjust the picture position when it is not aligned to the TV screen. Press + or – to adjust the picture position, then press ENTER.
“PROGRAM SETUP”	adjust each program number settings (see **Adjusting each program number settings (PROGRAM SETUP)** on page 25).
“COLOR SYS”	change the color system. Normally, set this to “AUTO”.

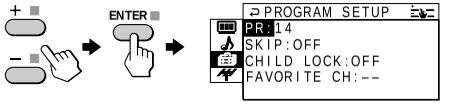
To return to the normal screen

Press MENU.

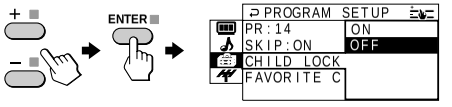
Adjusting each program number settings (PROGRAM SETUP)

1 Select “PROGRAM SETUP” from the “SETUP” menu.

2 Select “PR” and press ENTER. Press + or – to select the desired program number you want to adjust, then press ENTER.



3 Press + or – to select the desired item (e.g., ”CHILD LOCK”), then press ENTER.



Select	To
“PR”	select the desired program number.
“SKIP”	skip unwanted or unused program number. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.
“CHILD LOCK”	prevent children from watching this selected program number. Press + or – to select “ON”, then press ENTER. The lock symbol ( ) appears on the screen. To cancel, select “OFF”, then press ENTER. If you preset a locked program number, that particular program number will be unlocked automatically.
“FAVORITE CH”	program favorite channels for direct selection. Press + or – to select one of the six favorite channel numbers (if you decide not to make any changes, select “ ↩ ”), then press ENTER. To view the selected favorite channel, refer page 14.

4 To continue adjusting other program number, press + or – to select “PR”, then repeat step 2 and 3.

To return to the normal screen

Press MENU.

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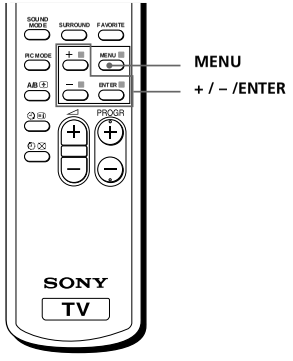
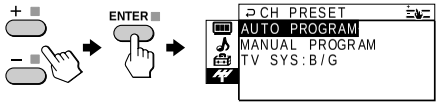
Changing the Channel Preset (“CH PRESET”) setting

The “CH PRESET” menu allows you to adjust the setup of your TV. For example, you can receive a channel with a weak signal that fails to be tuned in by automatic presetting.

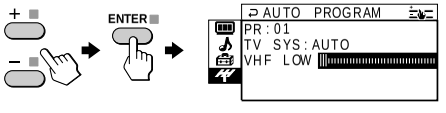


1 Press MENU.

2 Press + or – to select the “CH PRESET” icon (), then press ENTER.



3 Press + or – to select the desired item (e.g., “AUTO PROGRAM”), then press ENTER.



Select	To
AUTO PROGRAM	preset channels automatically.
MANUAL PROGRAM	preset channels manually (see **Presetting channels manually** on page 27).
TV SYS	change the TV system. Press + or – to select either “B/G”, “I”, “D/K” or “M”, then press ENTER.

To return to the normal screen

Press MENU.

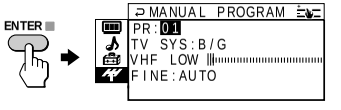
Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 18.

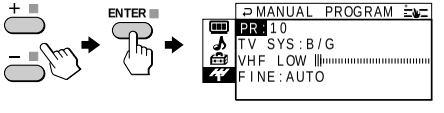
Presetting channels manually

1 After selecting “MANUAL PROGRAM”, select the program number to which you want to preset a channel.

(1) Make sure “PR” is selected , then press ENTER.

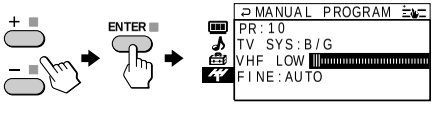


(2) Press + or – until the program number you want to preset (e.g., program number “10”) appears on the menu, then press ENTER.

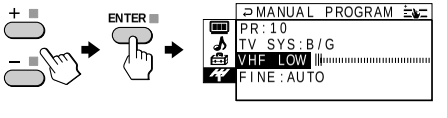


2 Select the desired channel.

(1) Make sure either “VHF LOW”, “VHF HIGH” or “UHF” is selected, then press ENTER.

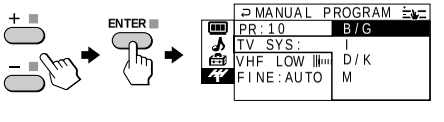


(2) Press + or – until the desired channel picture appears on the TV screen, then press ENTER.

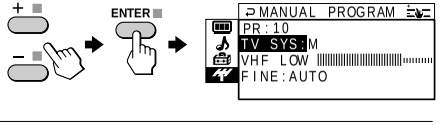


3 If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Press + or – to select “TV SYS”, then press ENTER.



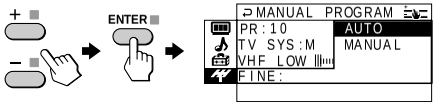
(2) Press + or – until the sound becomes normal (e.g., “M”), then press ENTER.



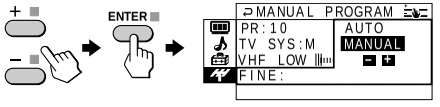
continued

4 If you are not satisfied with the picture and sound quality, you may improve them by using fine tuning.

(1) Press + or – to select “FINE”, then press ENTER.

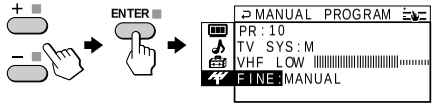


(2) Press + or – to select “MANUAL”, then press ENTER.



(3) Press + or – until the picture and sound quality are optimal, then press ENTER.

The + or – icon on the menu flashes while tuning.



To return to the normal screen

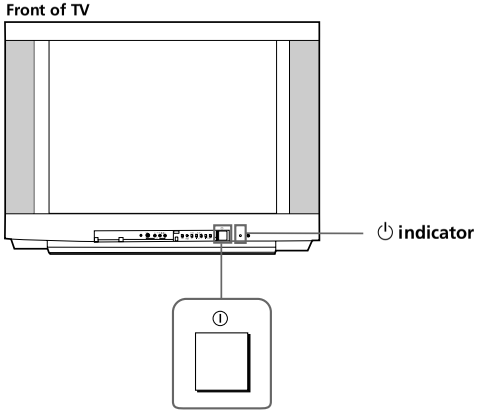
Press MENU.

Notes

- If you preset a locked program number (“CHILD LOCK”), that particular program number will be unlocked automatically (see page 25).
- The TV system (“TV SYS”) and the fine tuning (“FINE”) settings are memorized for each program number.

Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the ⏻ indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.



1 Check that the ⏻ indicator flashes red a number of times between 3-second intervals.

2 Count the number of times the ⏻ indicator flashes.

3 Press ⏻ (main power) to turn off your TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashes.
Be sure to note the model name and serial number located on the rear of your TV.

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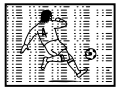
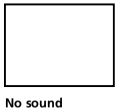
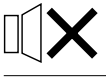
Troubleshooting

If you find any problem while viewing your TV, please check the following guide. If any problem persists, contact your Sony dealer .

Symptom	Possible cause	Solutions	Page
Snowy picture  Noisy sound	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Display the “CH PRESET” menu and select “MANUAL PROGRAM” to preset the channel again.	27
	• The antenna type is inappropriate.	• Check the antenna type (“VHF”/“UHF”). Contact a Sony dealer for advice.	–
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture Noisy sound	• Broadcast signals are too strong.	• Turn off or disconnect the booster if it is in use.	–
Good picture Noisy sound	• The TV system setting or channel presetting is inappropriate or incomplete.	• If the sound of all the channels are noisy, display the “CH PRESET” menu and check the TV system (“TV SYS”) setting, then select “AUTO PROGRAM” to preset the channels again. • If the sound of some channels are noisy, select the channel, then display the “CH PRESET” menu and select the appropriate TV system (“TV SYS”).	26 26
No picture  No sound 	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press I/⏻ (power). • Press ⏻ (main power) on the TV to turn off the TV for about five seconds, then turn it on again.	10 10

Symptom	Possible cause	Solutions	Page
Good picture No sound	• The volume level is too low.	• Press + to increase the volume level.	11
	• The sound is muted.	• Press 🔇 to cancel the muting.	11
	• Broadcast signal has a transmission problem.	• Press A / B until a good sound is heard.	16
Dotted lines or stripes	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or “ghosts”	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning (“FINE”) function.	– 28
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color	• The color level setting is too low.	• Display the “PICTURE” menu and select “ADJUST” of “PICTURE MODE”, then adjust the “COLOR” level.	21
	• The color system setting is inappropriate.	• Display the “SETUP” menu and check the color system (“COLOR SYS”) setting (usually set this to “AUTO”).	24
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
Abnormal color patches	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth’s magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. Do not move the TV while the TV is turned on. Press ⏻ (main power) on the TV to turn off the TV for about five minutes, then turn it on again.	–
TV cannot receive stereo broadcast signal.	• The stereo reception setting is inappropriate.	• Press A / B until “AUTO” appears on the screen.	16

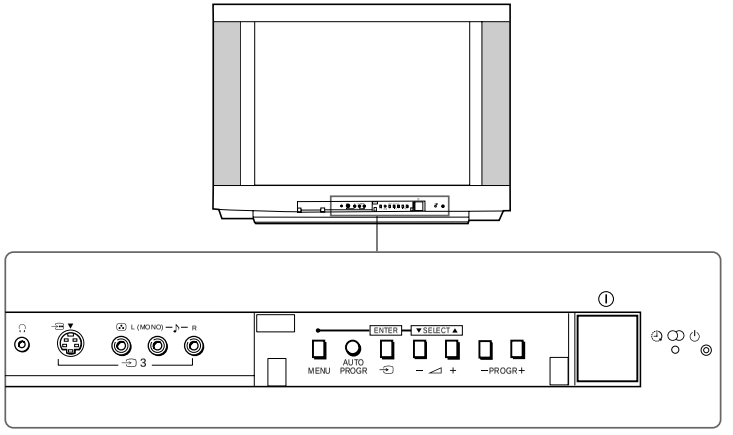
continued

Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Stereo broadcast sound switches on and off or is distorted. **or** **The sound switches between monaural and stereo frequently.**	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Broadcast signal has a transmission problem.	• Press A/B until a good sound is heard.	16
Picture slant	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Display the "SETUP" menu and adjust "PIC ROTATION" so that the picture is aligned to the TV screen.	– 24
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("FINE") function.	28
The ⏻ indicator on your TV flashes red a number of times between 3-second intervals.	• Your TV may need service.	• Contact your nearest Sony service center.	29
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.	—	–
A "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.	—	–

Overview of controls

TV front panel

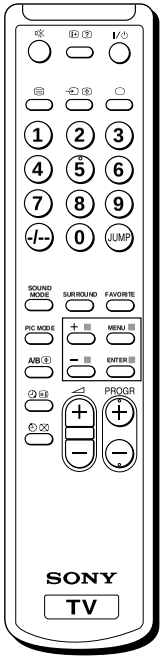


Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
⏻	Turn off completely or turn on the TV.	10
PROGR +/–	Select program number.	10
⏻	Standby indicator	10
◿ +/–	Adjust volume.	11
⏎	Select TV or video input.	11
🕘	Wake Up indicator	12
◯◯	Stereo/bilingual indicator.	16
Menu operations		
MENU	Display the menu.	19
SELECT ▾/▴	Select and adjust items.	19
ENTER	Confirm selected items.	19
🎧	Headphones jack.	–

continued

Overview of controls (continued)

Remote control



Names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations

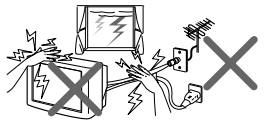
Button	Function	Page
I/⏻	Turn off temporarily or turn on the TV.	10
PROGR +/–	Select program number.	10
0 – 9, -/--	Input numbers.	10
+/–	Adjust volume.	11
	Select TV or video input.	11
	Display the TV program.	11
	Mute the sound.	11
	Display on-screen information.	11
JUMP	Jump to previous program number.	11
Timer operations		
	Set TV to turn on automatically.	12
	Set TV to turn off automatically.	12
PIC MODE	Select picture mode.	13
SOUND MODE	Select sound mode.	13
FAVORITE	Display favorite channels.	14
SURROUND	Select surround mode.	15
Stereo/bilingual operations		
A/B	Select stereo/bilingual mode.	16
Teletext operations (Not used for these model)		
	Display Teletext broadcast.	–
	Enlarge the Teletext display.	–
	Reveal concealed information.	–
	Stop Teletext display from scrolling.	–
	Display Teletext service contents.	–
	Show TV screen while waiting for Teletext page.	–
0 – 9	Input Teletext page number.	–
PROGR +/–	Display the next or previous page.	–
■ (red, green, yellow, blue)	Access a Fastext menu	–
Menu operations		
MENU	Display the menu.	19
+ or –	Select and adjust item.	19
ENTER	Confirm selected item.	19

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1
GENERAL 2-2
(KV-XA25N90)

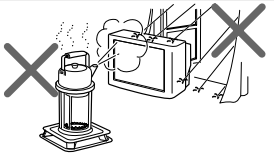
警告

- 本電視機內有危險性高電壓。
- 電視機的操作電壓：110 伏特交流電壓。

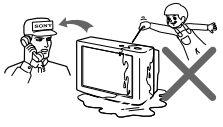


為了個人安全起見，雷雨期間，請勿觸摸電視機的任何部份，包括電源線和天線電纜。

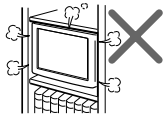
為了兒童安全起見，請勿讓他們獨自逗留在電視機旁。千萬別讓兒童攀爬本電視機。



為防止火災或觸電，請勿使本電視機被雨淋或受潮。

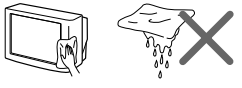


若有任何液體流入或固體落入本電視機內時，請勿操作本電視機。應立即請合格的專業人員檢查。



請勿堵塞本電視機的通風口。

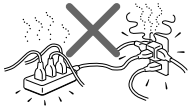
請勿將本電視機放置於諸如書架或嵌入式壁櫥等封閉之處。



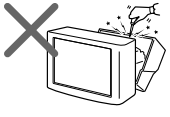
請用乾的軟布清潔本電視機。

請勿使用汽油、稀釋劑或任何其它化學品清潔本電視機。請勿刮劃顯像管。

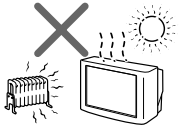
捏住插頭將電源線拔開。請勿直接拉拔電源線。若想移動本電視機或打算近期內不使用本電視機時，請將電源線斷開。



請勿在同一電源插座上插入太多的電器。請勿損壞電源線。

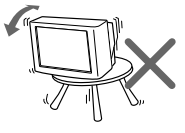


請勿打開本電視機的機殼和後蓋，因電視機內存在高電壓和危險性部件。須由合格的專業人員對電視機進行檢修或棄置。

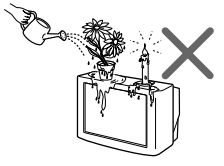


本電視機只適於家庭使用。請勿將本電視機放置於任何交通工具內或多塵、高溫、潮濕或震動頻繁之處。

警告（續）



請勿安裝本電視機於不穩固之處。應將其安裝在牢固的電視支架上。



請勿放置任何物體於電視機上。

準備工作

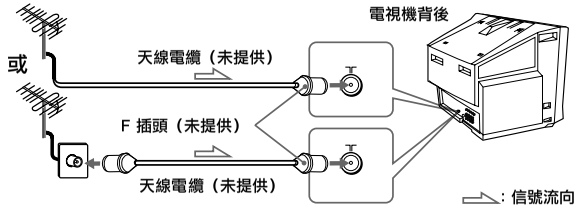
注意

- 若未完成所有連接程序，請勿接通電源；否則極少量的電流可能經天線或其它端子外泄。
- 若打算近期內不使用遙控器，請將電池取出，以避免電池泄漏而損壞遙控器。若您不小心觸及電池所泄漏的液體，應立即用水洗淨。

步驟 1

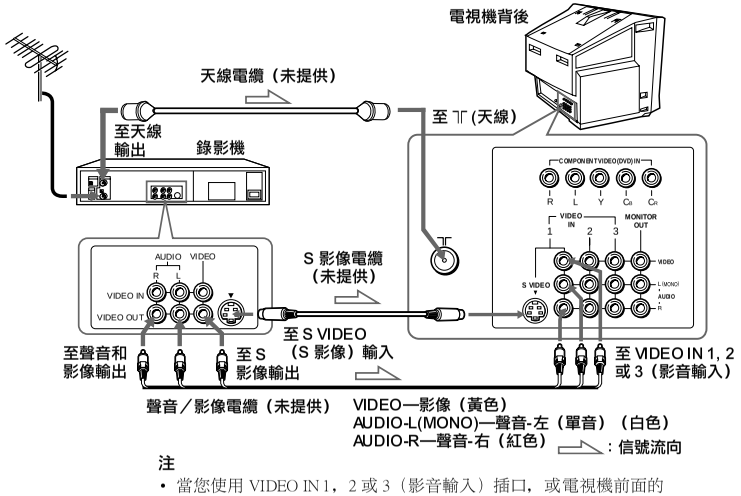
連接天線

若您想要連接錄影機，請參閱以下**連接錄影機**接線圖。



連接錄影機

要觀看視頻輸入時，請按壓 VIDEO（影音）鍵（參閱第12頁）。



注

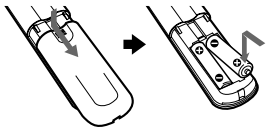
- 當您使用 VIDEO IN 1，2 或 3（影音輸入）插口，或電視機前面的 VIDEO 3 INPUT（影音 3 輸入）插口時，您也可通過“多系統視訊入端子”接收 PAL、NTSC 和 SECAM 的影音信號。

注

- 若與單聲道錄影機相連接，請將黃色插頭插至 VIDEO — 影像（黃色插口），而將黑色插頭插至 AUDIO - L (MONO) 聲音 - 左（單音）（白色插口）。
- 若將錄影機連接至 ⅂（天線）插口，則請將錄影機輸出的信號預設至電視機上的頻道號碼“0”。
- 當 S VIDEO（S 影像）輸入和 VIDEO IN 1（影音輸入）同時被連接時，S VIDEO（S 影像）輸入即自動被選定。要收看 VIDEO IN 1（影音輸入）輸入的畫面時，斷開 S 影像電纜即可。
- 請不要把影像裝置同時連接至本電視機前面的 VIDEO 3 INPUT（影音 3 輸入）插口和背後的 VIDEO IN 3（影音輸入）插口，否則圖像將會失真。
- 當無信號從影像裝置輸入電視機時，電視機的畫面即呈藍色。

步驟 2

將電池裝入遙控器

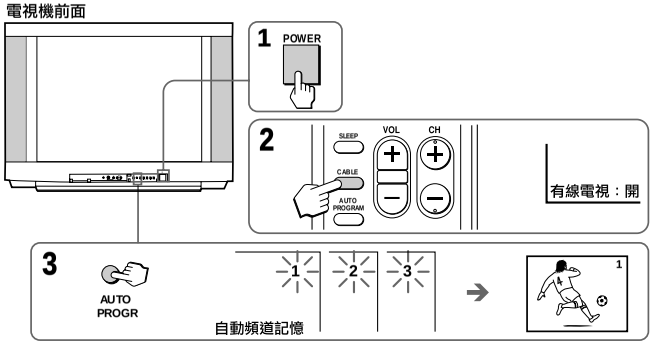


注

- 請勿使用舊電池或同時使用不同類型的電池。

步驟 3

自動預設頻道



提示

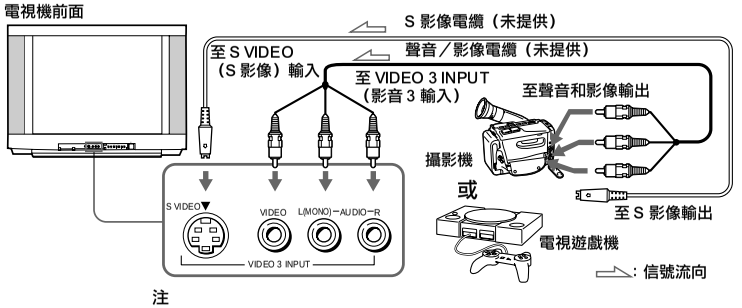
- 若您要停止自動頻道預設，請按壓 MENU（目錄）鍵。
- 若您的電視已預設一個不想要的頻道或不能預設某一個頻道，您就必須手動預設頻道（請參閱第10頁）。
- 遙控器上的 AUTO PROGRAM（自動頻道記憶）鍵也可當作電視機上的 AUTO PROGR（自動頻道記憶）鍵。

連接選購的裝置

本電視機可與錄影機、影碟機、DVD、攝影機、電視遊戲機或立體聲音響等選購的聲音／影像裝置相連接。

要觀看所連接裝置的影音輸入時，請按壓 VIDEO（影音）鍵（參閱第 12 頁）。

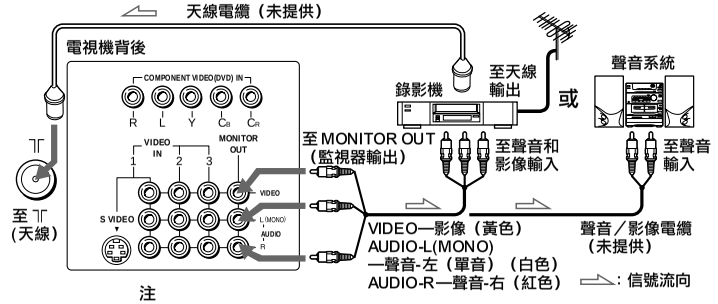
用 VIDEO 3 INPUT（影音 3 輸入）插口與攝影機／電視遊戲裝置相連接



注

- 當您使用電視機背後的 VIDEO IN 1，2 或 3（影音輸入）插口，或 VIDEO 3 INPUT（影音 3 輸入）插口時，您也可通過“多系統視訊入端子”接收 PAL, NTSC 和 SECAM 的影音信號。
- 若同時使用電視機前面的 S VIDEO（S 影像）輸入和 VIDEO 3 INPUT（影音 3 輸入），S VIDEO（S 影像）輸入即被自動選定。要收看 VIDEO 3 INPUT（影音 3 輸入）的畫面時，斷開 S 影像電纜即可。
- 您也可將影像裝置連接至本電視機背後的 VIDEO IN 1，2 或 3（影音輸入）插口。
- 請不要把影像裝置同時連接至本電視機前面的 VIDEO 3 INPUT（影音 3 輸入）和背後的 VIDEO IN 3（影音輸入）插口，否則畫面將會失真。

用 MONITOR OUT（監視器輸出）插口與聲音／影像裝置相連接

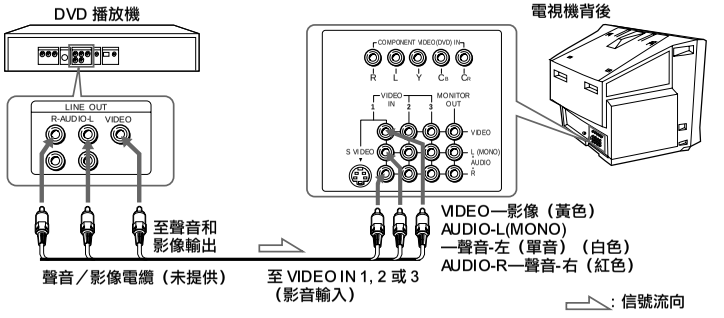


注

- 若您在電視畫面上選擇“DVD”，MONITOR OUT（監視器輸出）插口將不會輸出任何信號（參閱第 12 頁）。

用 VIDEO IN 1，2 或 3（影音輸入）插口與 DVD 播放機相連接

將電視機上的 VIDEO IN 1，2 或 3（影音輸入）AUDIO/VIDEO（聲音／影像）插口與 DVD 播放機上的 LINE OUT（線路輸出）插口相連接。



注

- 由於擁有高質量畫面的 DVD 碟片上包含許多信息，因此畫面可能出現紊亂。在這種情形下，請調整“畫面設定”選單中的“個人設定”項目的“銳度”（請參閱第 21 頁）。
- 請將您的 DVD 播放機直接連接至您的電視機。若中間通過其它影音裝置連接 DVD 播放機，則將導致不必要的畫面紊亂。

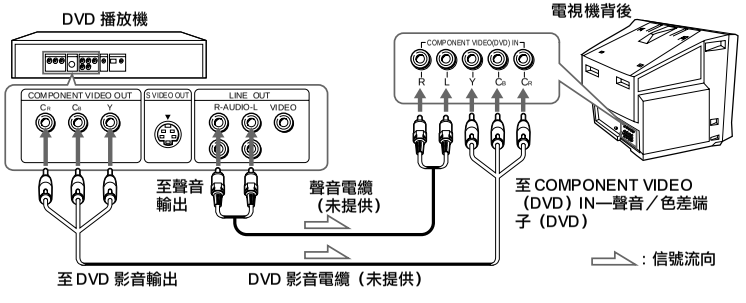
續

KV-XA25M60/XA25M63/XA25N90
RM-954 RM-914

連接選購的裝置（續）

用 COMPONENT VIDEO（DVD）IN （聲音／色差端子（DVD）輸入）插口與 DVD 播放機相連接

1 將電視機上的 COMPONENT VIDEO（DVD）IN（聲音／色差端子（DVD）輸入）R（右）和 L（左）插口與 DVD 播放機上的 LINE OUT（線路輸出）的AUDIO（聲音）R（右）和 L（左）輸出插口連接起來。
2 用 DVD 影音電纜將電視機上的 COMPONENT VIDEO（DVD）IN（聲音／色差端子（DVD）輸入）Y，C_B 和 C_R 插口連接至 DVD 播放機上的 COMPONENT VIDEO OUT（DVD 影音輸出）Y，C_B 和 C_R 插口。
3 按壓遙控器上的 VIDEO（影音）鍵或電視機上的 TV/VIDEO（電視／影音）鍵直到“DVD”顯示在畫面上。



注

• 某些 DVD 播放機的插口可能標記不同：

連接	至（DVD 播放機上的）
Y（綠色）	Y
C_B（藍色）	C_b，B-Y 或 P_B
C_R（紅色）	C_r，R-Y 或 P_R

• 您必須連接電視機上的 COMPONENT VIDEO（DVD）IN（聲音／色差端子（DVD）輸入）Y，C_B 和 C_R 插口以接收影像信號。同時，您也必須連接 L（左）和 R（右）插口以接收模擬聲音信號。

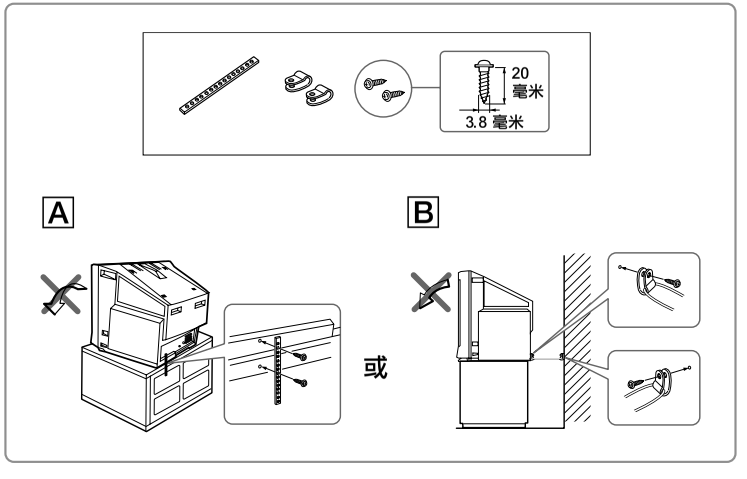
固定電視機

為防止電視機摔落，請採用下述方法之一將電視機固定：

A 將固定用的帶條，用所提供的螺釘按帶條上的孔安裝在電視機背後和其支架上。

或

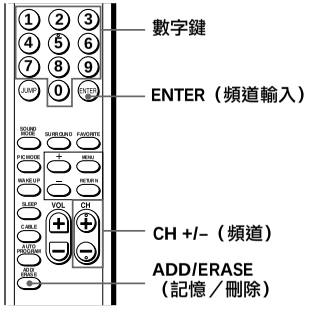
B 用一根繩索或鏈條穿過夾子將電視機固定在牆上或柱子上。



注

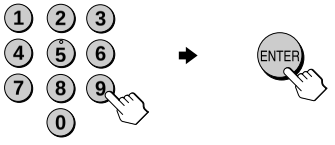
• 請僅使用提供的螺釘。 使用其它螺釘可能會損壞本電視機。

手動預設頻道



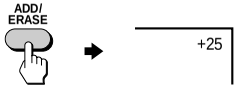
要接收一個新的頻道或接收一個信號微弱的頻道時，請手動預設頻道。

1 **按壓數字鍵以選擇您所要的頻道號碼，然後按壓 ENTER（頻道輸入）鍵。**



2 **按壓 ADD/ERASE（記憶／刪除）鍵。**

“+”顯示於頻道號碼旁邊，這表示頻道預設已完成。



解除頻道號碼

解除了不用或不要的頻道號碼後，當按壓 CH +/–（頻道）鍵時，您就可跳躍那些頻道號碼。

1 **按壓 CH +/–（頻道）鍵直到不用或不要的頻道號碼顯示於畫面上。**

2 **按壓 ADD/ERASE（記憶／刪除）鍵。**

“–”顯示於頻道號碼旁邊，這表示頻道號碼已被解除。

要取消跳躍頻道設定時

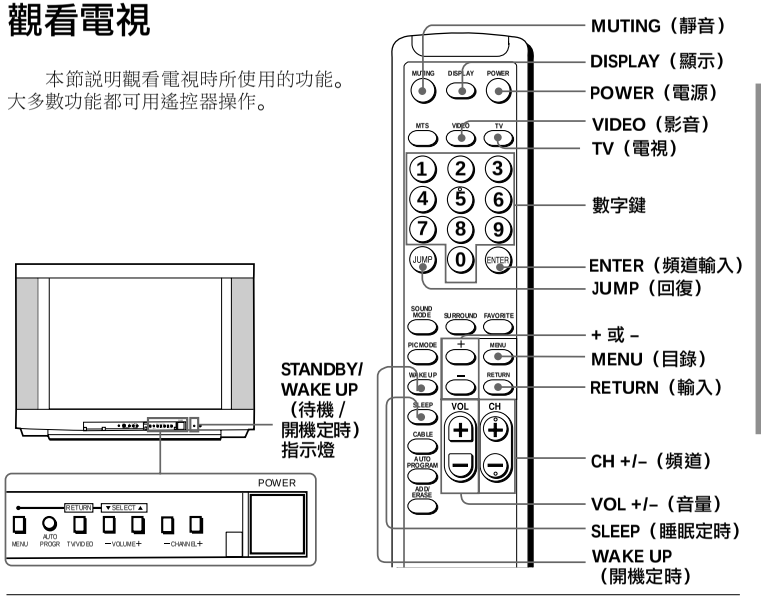
再次手動或自動預設頻道。

提示

- 您也可使用選單以手動預設頻道（請參閱第 25 頁的**調整個別頻道號碼的設定（頻道設定）**）。

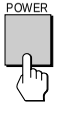
觀看電視

本節說明觀看電視時所使用的功能。大多數功能都可用遙控器操作。

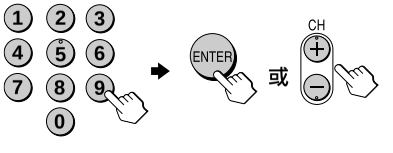


1 **按壓電視機上的 POWER（電源）鍵。**

當電視機處於待機狀態時（電視機上的 STANDBY（待機）指示燈已發出紅色亮光），按壓遙控器上的 POWER（電源）鍵或電視機上的 CHANNEL（頻道）+/– 鍵。



2 **要選擇頻道號碼時，按壓數字鍵後再按壓 ENTER（頻道輸入）鍵，或直接按壓 CH +/–（頻道）鍵。**



要快速選擇某一個頻道號碼時

(1) 持續按壓 CH +/–（頻道）鍵。
(2) 當您所要的頻道號碼顯示時，停止按壓 CH +/–（頻道）鍵。

注

- 當您快速選擇某一個頻道號碼時，畫面可能會失真。這並不表示發生故障。

續

KV-XA25M60/XA25M63/XA25N90
RM-954 RM-914

觀看電視（續）

附加操作

要	按壓
暫時切斷電視機的電源	遙控器上的 POWER（電源）鍵。電視機上的 STANDBY（待機）指示燈即發出紅色亮光。
完全切斷電視機的電源	電視機上的 POWER（電源）鍵。
調整音量	VOL +/–（音量）鍵。
消除聲音	MUTING（靜音）鍵。
觀看影像輸入（錄影機、攝影機等）	VIDEO（影音）鍵（或電視機上的 TV/VIDEO（電視／影音）鍵）以選擇“影音輸入 1”、“影音輸入 2”、“影音輸入 3”或“DVD”。要回到電視畫面時，按壓 TV（電視）鍵（或電視機上的 TV/VIDEO（電視／影音）鍵）即可。
跳回到之前收看的頻道號碼	JUMP（回復）鍵。
顯示畫面上的信息*	DISPLAY（顯示）鍵。

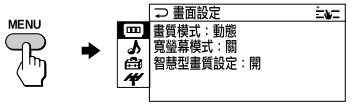
* 畫面上即顯示圖像、聲音，以及頻道號碼或影音輸入信息。畫面上的圖像和聲音信息在顯示三秒左右後即消失。

改變選單語言

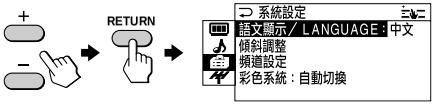
您可改變選單語言和畫面語言。

欲知有關於如何使用選單的詳情，請參閱第 18 頁的**介紹選單系統**。

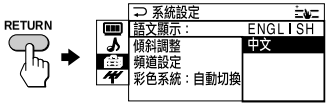
1 **按壓 MENU（目錄）鍵。**



2 **按壓 + 或 – 鍵以選擇“系統設定”符號（），然後按壓 RETURN（輸入）鍵。**

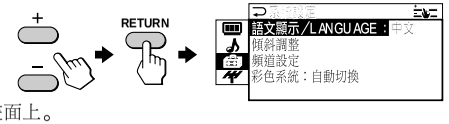


3 **確定“語文顯示/LANGUAGE”已被選擇，然後按壓 RETURN（輸入）鍵。**



4 **按壓 + 或 – 鍵以選擇所要的語言（例如，“ENGLISH”），然後按壓 RETURN（輸入）鍵。**

被選擇的選單語言將顯示在畫面上。



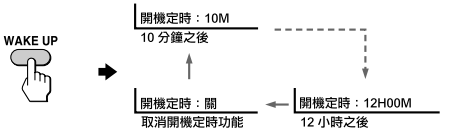
要回到普通畫面顯示時

按壓 MENU（目錄）鍵。

設定開機定時器

1 **按壓 WAKE UP（開機定時）鍵直到您所指定的時間顯示在畫面上。**

一旦時間被設定，喚醒定時器立即啟動。



2 **選擇當您醒來時所要觀看的頻道號碼或影音輸入。**

3 **若您要電視機自動切斷電源，請按壓 POWER（電源）鍵或設定睡眠定時功能。**

電視機上的 WAKE UP（開機定時）指示燈即發出橙色亮光。

要取消開機定時器時

按壓 WAKE UP（開機定時）鍵直到“開機定時：關”顯示在畫面上或切斷電視機主電源。

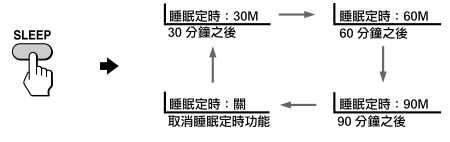
注

- 用開機定時器接通電視機電源並超過兩小時後，若您不按壓電視機或遙控器上的任何一個按鍵或控制鍵，則電視機再進入待機狀態。要繼續觀看電視時，按壓電視機或遙控器上的任何一個按鍵或控制鍵即可。

設定睡眠定時器

按壓 SLEEP（睡眠定時）鍵直到您所指定的時間顯示在畫面上。

一旦時間被設定，睡眠定時器立即啟動。

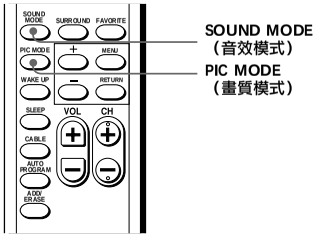


要取消睡眠定時器時

按壓 SLEEP（睡眠定時）鍵直到“睡眠定時：關”顯示在畫面上或切斷電視機電源。

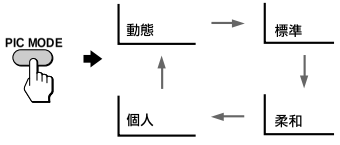
選擇畫質和音效模式

您可選擇畫質和音效模式並使用“個人”模式來調整您所偏好的設定。



選擇畫質模式

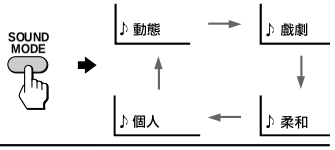
重復按壓 PIC MODE （畫質模式）鍵直到您所要的畫質模式被選定。



選擇	以
“動態”	接收對比度強的畫面。
“標準”	接收普通的畫面。
“柔和”	接收柔和的畫面。
“個人”	接收“畫面設定”選單中的“設定”項目所調整的最終畫面設定（請參閱第 21 頁）。

選擇音效模式

重復按壓 SOUND MODE （音效模式）鍵直到您所要的音效模式被選定。



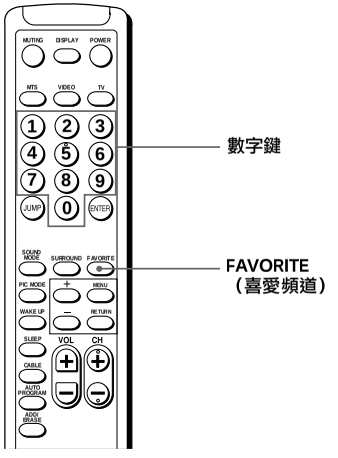
選擇	以
“動態”	收聽強調低和高音調的動態及清晰音響。
“戲劇”	收聽強調人聲和高音調的聲音。
“柔和”	接收柔和的聲音。
“個人”	接收在“聲音設定”選單中的“設定”項目所調整的最終聲音設定（請參閱第 23 頁）。

提示

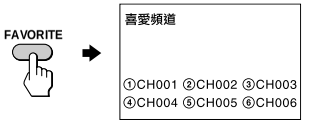
- 您也可使用選單設定畫質和音效模式（請參閱第 20 頁的**調整“畫面設定”**和第 22 頁的**調整“聲音設定”**）。

觀看喜愛頻道

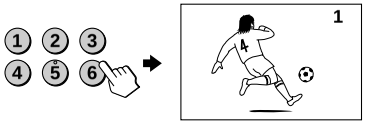
您可簡易快速的在電視畫面上顯示和選擇六個喜愛頻道。



1 **按壓FAVORITE（喜愛頻道）鍵。**



2 **按壓 1 至 6 的數字鍵以選擇您所要的喜愛頻道。**



提示

- 要輸入喜愛頻道時，請參閱第 25 頁的**調整個別頻道號碼的設定（頻道設定）**。

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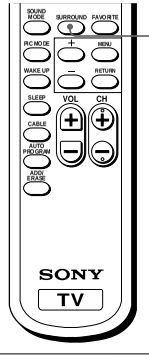
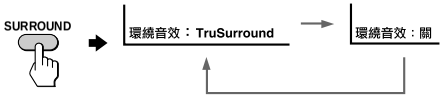
收聽環繞音效

環繞音效功能可使您欣賞音樂廳或電影院的音響效果。



重復按壓 SURROUND（環繞音效）鍵至接收到您想收聽的環繞音效。



選擇	以
“TruSurround”	收聽傳遍整個房間的環繞音效。
“關”	關閉環繞音效。

提示

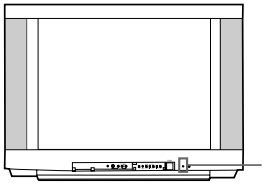
- 您也可使用選單選擇環繞音效（請參閱第 22 頁的**調整“聲音設定”**）。

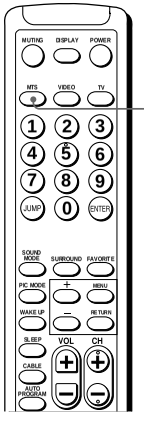
您的電視機的環繞音效是屬於 TruSurround 的音響效果。

TruSurround™ 是 SRS Labs, Inc. 的註冊商標。SRS Labs, Inc. 已經在美國及一些特選國家註冊 SRS 詞和 SRS 標識。帶有 SRS 及 TruSurround 標識的產品是獲得 SRS Labs, Inc. 的準許下所製造生產的，並在美國的專利號碼 4,748,669 和 4,841,572 以及另外幾個國家發表而待解決的專利權下受到保護。

欣賞立體聲或雙語言節目

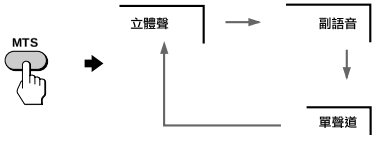
您可欣賞 MTS（音聲多重）立體聲制式的立體聲音響或雙語言節目。





當接收到 MTS 立體聲節目，重復按壓 MTS（音聲多重）鍵至接收到您想收聽的音響。

當接收到任何立體聲節目時，電視機上的 STEREO（立體聲）指示燈即呈紅色亮光。



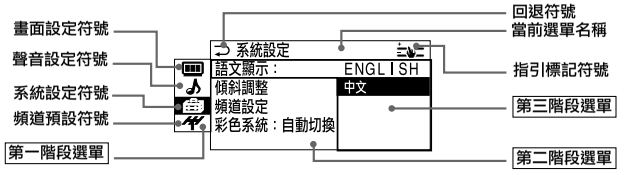
選擇	以
“立體聲”	收聽立體聲。
“副語音”	收聽雙語言節目。
“單聲道”	接收單聲道的聲音。

注

- 當選擇“副語音”時，非副語音節目的聲音將會與立體聲相似。
- 當信號微弱時，“副語音”或“立體聲”的聲音可能會不正常。要改善聲音，選擇“單聲道”。

介紹選單系統

MENU（目錄）鍵能讓您顯示選單和調整電視上的設定。以下是選單系統的總概況。

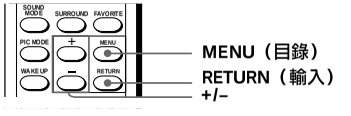


第一階段	第二階段	第三階段／功能
“畫面設定”	“畫質模式”	選擇畫質模式： “動態” → “標準” → “柔和” → “個人” → “設定”
	“個人設定”	調整“個人”項目： “對比” → “彩色” → “亮度” → “色相” → “銳度”
	“寬螢幕模式”	改變畫面的尺寸。
	“智慧型畫質設定”	接收最理想的畫面效果。
“聲音設定”	“音效模式”	選擇音效模式： “動態” → “戲劇” → “柔和” → “個人” → “設定”
	“個人設定”	調整“個人”項目： “低音” → “高音” → “平衡” → “BBE”*
	“環繞音效”	選擇環繞音效模式： “TruSurround” → “關”
	“智慧型音量設定”	自動調整音量。
“系統設定”	“語文顯示／LANGUAGE”	改變選單語文顯示： “中文” — “ENGLISH”（英文）
	“傾斜調整”	調整畫面位置。
	“頻道設定”	調整個別頻道號碼的設定。
	“彩色系統”	選擇彩色系統（僅於影音輸入）： “自動切換” → “PAL” → “SECAM” → “NTSC3.58” → “NTSC4.43”
“頻道預設”	“自動頻道記憶”	自動預設頻道。
	“有線電視”	收看有線電視節目。

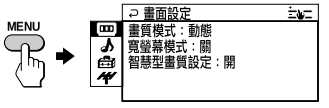
* BBE 是 SONY 公司經 BBE 音響公司獲準後製造生產的，並應用了美國專利號碼 No. 4,638,258 和 No. 4,482,866。“BBE”這詞與 BBE 這符號是 BBE 音響公司的註冊商標。

如何使用選單

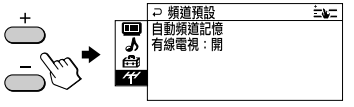
您可使用遙控器或電視機上的按鍵來顯示選單和調整設定。



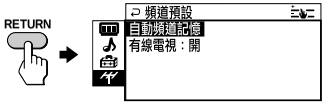
1 按壓 MENU（目錄）鍵以顯示選單。



2 按壓 + 或 – 鍵以選擇所要的項目。



3 按壓 RETURN（輸入）鍵以確定您所選的項目和進入下一個階段的選單。



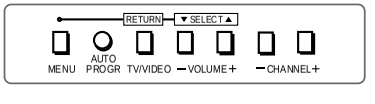
其它選單操作

要	按壓
調整設定數值	+ 或 – 鍵
回到之前一個階段的選單	RETURN（輸入）鍵
取消選單	MENU（目錄）鍵

提示

- 若您要從第二階段菜單回到第一階段菜單時，請按壓 + 或 – 鍵直到回退符號（⮌）被選中，然後按壓 RETURN（輸入）鍵。
- 您也可使用遙控器的按鍵以直接操作選單上的某些項目。
- 電視機上的 MENU（目錄）鍵、RETURN（輸入）鍵和 SELECT ▼/▲（功能選擇）鍵也可同時用於上述操作。

電視機前面



注

- 若兩次輸入之間的時間超過 60 秒，則選單將會從畫面上自動消失。

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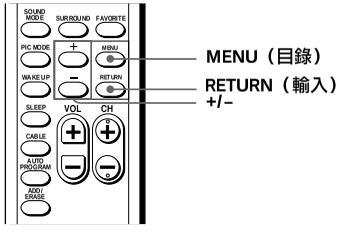
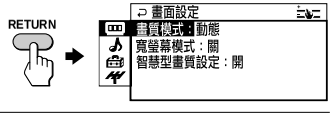
調整“畫面設定”

“畫面設定”選單可使您調整畫面設定。

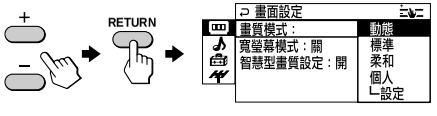


1 按壓 MENU（目錄）鍵。

2 確認“畫面設定”符號（▭）已被選擇，然後按壓 RETURN（輸入）鍵。



3 按壓 + 或 – 鍵以選擇所要的項目（例如，“畫質模式”），然後按壓 RETURN（輸入）鍵。



選擇	以
“畫質模式”	選擇“動態”、“標準”、“柔和”、“個人”* 或“設定”。
“寬螢幕模式”	改變寬螢幕模式（16 : 9）信號的畫面尺寸。 按壓 + 或 – 鍵以選擇“開”，然後按壓 RETURN（輸入）鍵。 要回到普通畫面尺寸時，選擇“關”，然後按壓 RETURN（輸入）鍵。
“智慧型畫質設定”	接收最理想的畫面效果。 按壓 + 或 – 鍵以選擇“開”，然後按壓 RETURN（輸入）鍵。 要取消時，選擇“關”，然後按壓 RETURN（輸入）鍵。

* 當選擇“個人”模式時，您可接收到最後一次在“設定”模式中所調整的畫面設定（請參閱第 21 頁）。

注

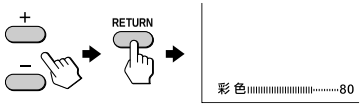
• 關於“畫質模式”的詳情，請參閱第 14 頁。

要回到普通畫面顯示時

按壓 MENU（目錄）鍵。

調整“畫質模式”下的“設定”項目（個人設定）

1 按壓 + 或 – 鍵以選擇所要的項目（例如，“彩色”），然後按壓 RETURN（輸入）鍵。



2 按照下表調整項目值，然後按壓 RETURN（輸入）鍵。

項目	按壓 – 鍵以	按壓 + 鍵以
“對比”	降低畫面對比度	提高畫面對比度
“彩色”	減低彩色濃度	增加彩色濃度
“亮度”	降低畫面亮度	提高畫面亮度
“色相”	使畫面色調增強紅色	使畫面色調增強綠色
“銳度”	使畫面柔和	使畫面鮮明

3 重復上述步驟以調整其它項目。

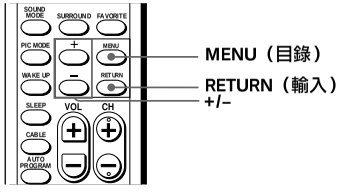
當選擇“個人”項目時，您可接收已被調整的設定。

提示

• 有關選單系統詳情和如何使用選單，請參閱第 18 頁的**介紹選單系統**。

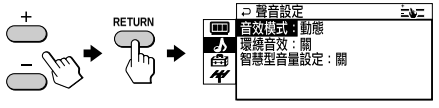
調整“聲音設定”

“聲音設定”選單可使您調整音響設定。

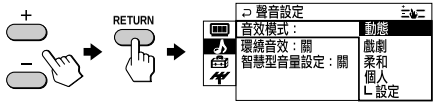


1 按壓 MENU（目錄）鍵。

2 按壓 + 或 – 鍵以選擇“聲音設定”符號（♪），然後按壓 RETURN（輸入）鍵。



3 按壓 + 或 – 鍵以選擇所要的項目（例如，“音效模式”），然後按壓 RETURN（輸入）鍵。



選擇	以
“音效模式”	選擇“動態”、“戲劇”、“柔和”、“個人”* 或“設定”。
“環繞音效”	選擇“TruSurround”或“關”。
“智慧型音量設定”	自動調整所有頻道號碼和影音輸入的音量。 按壓 + 或 – 鍵以選擇“開”，然後按壓 RETURN（輸入）鍵。 要取消時，選擇“關”，然後按壓 RETURN（輸入）鍵。

* 當選擇“個人”模式時，您可接收到最後一次在“個人設定”模式中所調整的聲音設定（請參閱第 23 頁）。

提示

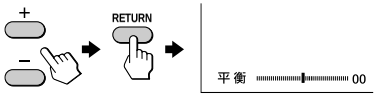
• 關於“音效模式”和“環繞音效”的詳情，請參閱第14 和16 頁。

要回到普通畫面顯示時

按壓 MENU（目錄）鍵。

調整“音效模式”下的“設定”項目（個人設定）

1 按壓 + 或 – 鍵以選擇所要的項目（例如，“平衡”），然後按壓 RETURN（輸入）鍵。



2 按照下表調整項目值，然後按壓 RETURN（輸入）鍵。

設定	按壓 – 鍵以	按壓 + 鍵以
“低音”	減弱低音	增強低音
“高音”	減弱高音	增強高音
“平衡”	提高左揚聲器的音量	提高右揚聲器的音量
“BBE”	選擇“強”以強調較高的聲音清純度； 選擇“弱”以強調較低的聲音清純度； 選擇“關”以取消 BBE 功能。	

3 重復上述步驟以調整其它項目。

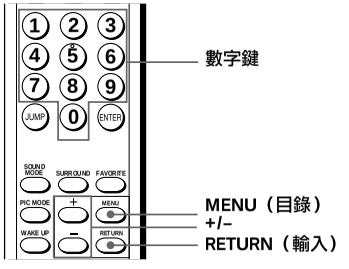
當選擇“個人”項目時，您可接收已被調整的設定。

提示

• 有關選單系統和如何使用選單，請參閱第18 頁的**介紹選單系統**。

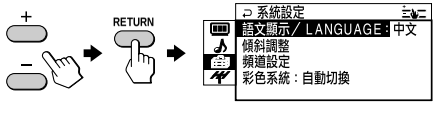
調整“系統設定”選單

“系統設定”選單可讓您更換選單語言，調整畫面位置，調整頻道號碼的設定以及更換彩色系統。

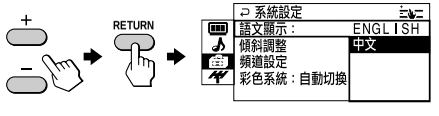


1 按壓 MENU（目錄）鍵。

2 按壓 + 或 – 鍵以選擇“系統設定”符號（🧰），然後按壓 RETURN（輸入）鍵。



3 按壓 + 或 – 鍵以選擇所要的項目（例如，“語文顯示／LANGUAGE”），然後按壓 RETURN（輸入）鍵。



選擇	以
“語文顯示/LANGUAGE”	更換選單語言（請參閱第 12 頁的**改變選單語言**）。
“傾斜調整”	調整電視上傾斜的畫面。 按壓 + 或 – 鍵以調整畫面位置，然後按壓 RETURN（輸入）鍵。
“頻道設定”	調整個別頻道號碼的設定（請參閱第 25 頁的**調整個別頻道號碼的設定（頻道設定）**）。
“彩色系統”	更換彩色系統（僅於影音輸入）。 按壓 + 或 – 鍵以選擇適當的彩色系統，然後按壓 RETURN（輸入）鍵。通常將此設定為“自動切換”。

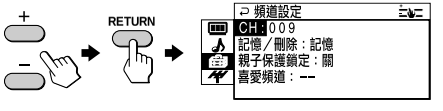
要回到普通畫面顯示時

按壓 MENU（目錄）鍵。

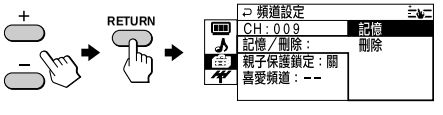
調整個別頻道號碼的設定（頻道設定）

1 選擇“系統設定”選單中的“頻道設定”。

2 選擇“CH”後再按壓 RETURN（輸入）鍵。按壓 + 或 – 鍵以選擇您所要調整的頻道號碼，然後按壓 RETURN（輸入）鍵。



3 按壓 + 或 – 鍵以選擇您所要的項目（例如，“記憶 / 刪除”），然後按壓 RETURN（輸入）鍵。



選擇	以
“CH”	選擇您所要的頻道號碼。
“記憶／刪除”	手動預設被選的頻道。 按壓 + 或 – 鍵以選擇“記憶”，然後按壓 RETURN（輸入）鍵。 若要略掉不用或不要的頻道號碼，選擇“刪除”，然後按壓 RETURN（輸入）鍵。 您也可使用遙控器上的 ADD/ERASE（記憶／刪除）鍵以手動預設頻道，請參閱第 10 頁。
“親子保護鎖定”	避免小孩觀看某些電視頻道號碼。 按壓 + 或 – 鍵以選擇“開”，然後按壓 RETURN（輸入）鍵。 親子保護鎖定符號（🔒）即顯示在畫面上。 要取消時，選擇“關”，然後按壓 RETURN（輸入）鍵。 若您預設任何一個鎖定頻道號碼，此頻道號碼將自動解鎖。
“喜愛頻道”	直接選出六個已被設定的喜愛頻道。 按壓 + 或 – 鍵以選擇六個喜愛頻道號碼中的其中一個（若您決定不更改原來的設定，請選擇“⮌”符號），然後按壓 RETURN（輸入）鍵。 若要觀看所選擇的喜愛頻道，請參閱第 15 頁。

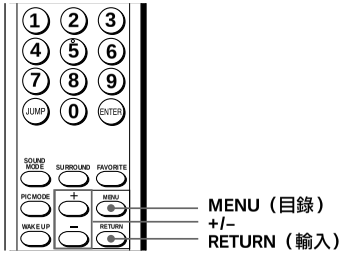
4 若要繼續調整其它頻道號碼，按壓 + 或 – 鍵以選擇“CH”，然後重復第 2 和第 3 步驟。

要回到普通畫面顯示時

按壓 MENU（目錄）鍵。

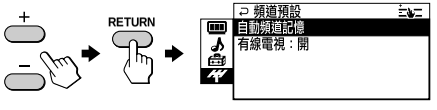
調整“頻道預設”設定

“頻道預設”選單可使您調整電視機的設定，以接收有線電視或 VHF/UHF 廣播頻道。

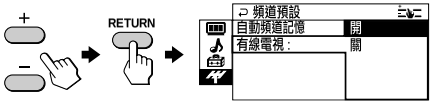


1 按壓 MENU（目錄）鍵。

2 按壓 + 或 – 鍵以選擇“頻道預設”符號（📡），然後按壓 RETURN（輸入）鍵。



3 按壓 + 或 – 鍵以選擇您所要的項目，（例如，“有線電視”），然後按壓 RETURN（輸入）鍵。



選擇	以
“自動頻道記憶”	自動預設頻道。 若您自動預設任何一個鎖定頻道號碼，此頻道號碼將自動解鎖（請參閱第 25 頁）。
“有線電視”	接收有線電視節目。 按壓 + 或 – 鍵以選擇“開”，然後按壓 RETURN（輸入）鍵。 若沒有有線電視，您將接收 VHF/UHF 廣播頻道。 若只想接收 VHF/UHF 廣播頻道，選擇“關”，然後按壓 RETURN（輸入）鍵。

要回到普通畫面顯示時

按壓 MENU（目錄）鍵。

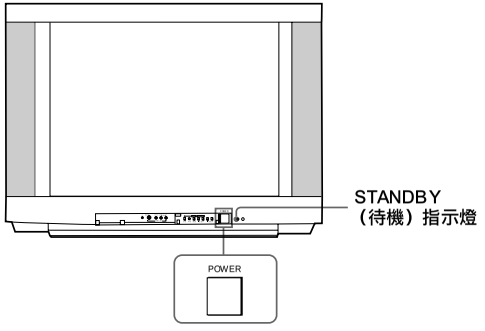
提示

- 有關選單系統詳情和如何使用選單，請參閱第 18 頁的**介紹選單系統**。

自動檢測判斷功能

您的電視機設有自動檢測判斷功能的裝配。如果您的電視機發生故障，STANDBY（待機）指示燈將會發出紅色亮光。電視機上的 STANDBY（待機）指示燈所發出的亮光次數將表明可能存在的原因。

電視機前面



1 檢查 STANDBY（待機）指示燈所發出的紅色亮光是否相隔三秒。

2 計算 STANDBY（待機）指示燈的亮光次數。

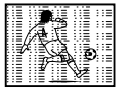
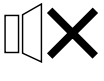
3 按壓 POWER（電源）鍵以切斷電視機的電源。

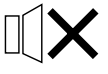
4 通知您鄰近的 Sony 經銷商有關於 STANDBY（待機）指示燈所發出的亮光次數。確定您將電視機背後所註明的機型和機身號記錄下來。

KV-XA25M60/XA25M63/XA25N90
RM-954 RM-914

故障檢修

若在觀看電視時遇見任何問題，您可參閱下列故障檢修指南。若問題仍然存在，請聯絡 Sony 經銷商。

癥狀	可能因素	解決方法	頁面
畫面有雪花狀斑點  有噪聲 	• 連接已鬆脫或電纜已損壞。	• 檢查天線電纜以及電視機，錄影機和牆上的天線連接是否正確。	4
	• 頻道預設不適當或不完整。	• 再次預設頻道。	10
	• 天線類型使用不合適。	• 檢查天線類型（VHF/UHF）。請尋求 Sony 經銷商的協助。	–
	• 天線定位方向不正確。	• 調整天線方向。請尋求 Sony 經銷商的協助。	–
	• 傳送信號微弱。	• 嘗試使用信號增強器。	–
畫面失真 有噪聲 	• 廣播信號太強。	• 切斷信號增強器的電源或拔掉插頭以終止其操作。	–
沒有畫面 沒有聲音 	• 電源線、天線或錄影機沒有被連接。	• 檢查電源線、天線和錄影機之連接是否正確。	4
	• 電視機電源沒有被接通。	• 按壓遙控器上的 POWER（電源）鍵。 • 按壓電視機上的 POWER（電源）鍵以切斷電視機電源，五秒左右後再次接通電源。	11 11

癥狀	可能因素	解決方法	頁面
畫面良好 沒有聲音 	• 音量水平太低。	• 按壓 VOL +（音量）鍵以提高音量水平。	12
	• 聲音被消除。	• 按壓 MUTING（靜音）鍵以取消消音。	12
	• 廣播信號有傳送故障。	• 按壓 MTS（音聲多重）鍵直到聲音正常為止。	17
畫面有點線或條紋 	• 受周圍環境（如汽車、霓虹燈、吹風機、發電機等）影響。	• 不要在電視機旁使用吹風機或其它電器。 • 調整天線方向以減低干擾。請尋求 Sony 經銷商的協助。	– –
畫面出現雙重影像 	• 廣播信號受周圍高山或大廈干擾。	• 使用高定向天線。	–
	• 天線定位方向不正確。	• 調整天線方向。請尋求 Sony 經銷商的協助。	–
	• 信號增強器使用不適當。	• 切斷信號增強器的電源或拔掉插頭以終止其操作。	–
畫面無彩色 	• 彩色水平設定太低。	• 顯示“畫面設定”選單並選擇“畫質模式”裡的“設定”項目，然後調整“彩色”濃度。	21
	• 彩色系統設定不正確（僅於影音輸入）。	• 顯示“系統設定”選單，並檢查“彩色系統”設定（通常將此設定為“自動切換”）。	24
	• 天線定位方向不正確。	• 調整天線方向。請尋求 Sony 經銷商的協助。	–
畫面出現反常彩色斑點 	• 受外部揚聲器或其它電器電磁性的影響，或受地球磁場方向的影響。	• 將電視機放置在離外部揚聲器或其它電器較遠的地方。請別移動已被接通電源的電視機。按壓電視機上的 POWER（電源）鍵以切斷電視機電源。約五分鐘後再接通電視機電源。	–
電視機無法接收立體聲廣播信號。	• 立體聲接收設定不適當。	• 按壓 MTS（音聲多重）鍵直到“立體聲”顯示於畫面上。	17

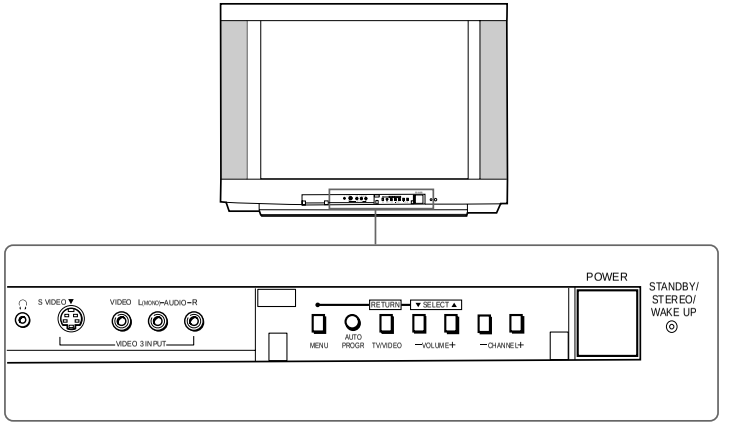
續

故障檢修（續）

癥狀	可能因素	解決方法	頁面
立體聲廣播聲音開關失常或聲音失真。 **或** 立體聲和單聲道之間的聲音頻繁切換。	• 連接已鬆脫或電纜已損壞。	• 檢查天線電纜以及電視機，錄影機和牆上的天線連接是否正確。	4
	• 天線定位方向不正確。	• 調整天線方向。請尋求 Sony 經銷商的協助。	–
	• 廣播信號有傳送故障。	• 按壓 MTS（音聲多重）鍵直到聲音正常為止。	17
畫面傾斜 	• 受外部揚聲器或其它電器電磁性的影響，或受地球磁場方向的影響。	• 將電視機放置在離外部揚聲器或其它電器較遠的地方。 • 顯示“系統設定”選單以選擇“傾斜調整”，然後調整電視上的傾斜畫面。	– 24
電視機上的 STANDBY（待機）指示燈每隔三秒閃爍至少一次的紅色亮光。	• 您的電視機可能需要修理。	• 請尋求 Sony 經銷商的協助。	27
電視機外殼吱嘎聲。	• 室溫的變化有時會導致電視機的外殼膨脹或縮小，因而產生噪聲。這並不表示發生故障。	—	–
當您接通電視機時聽到“嘣”的聲音。	• 電視機自動消磁。這並不表示發生故障。	—	–

控制鍵總概況

電視機前面的控制板

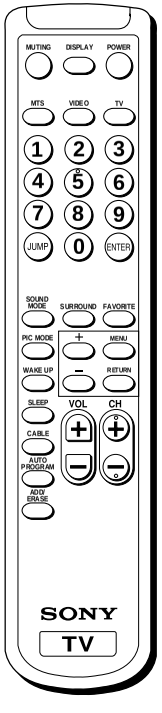


按鍵	功能	頁面
AUTO PROGR（自動頻道記憶）	自動預設頻道。	5
POWER（電源）	打開或完全關閉電視機。	11
CHANNEL +/–（頻道）	選擇頻道號碼。	11
STANDBY（待機）	待機指示燈。	11
VOLUME +/–（音量）	調整音量。	12
TV/VIDEO（電視／影音）	選擇電視或影音輸入。	12
WAKE UP（開機定時）	開機定時指示燈。	13
STEREO（立體聲）	立體聲／雙語言指示燈。	17
目錄操作 MENU（目錄）	顯示選單。	19
SELECT ▼/▲（功能選擇）	選擇和調整項目。	19
RETURN（輸入）	確認被選的項目。	19
∩	耳機插口。	–

續

控制鍵總概況（續）

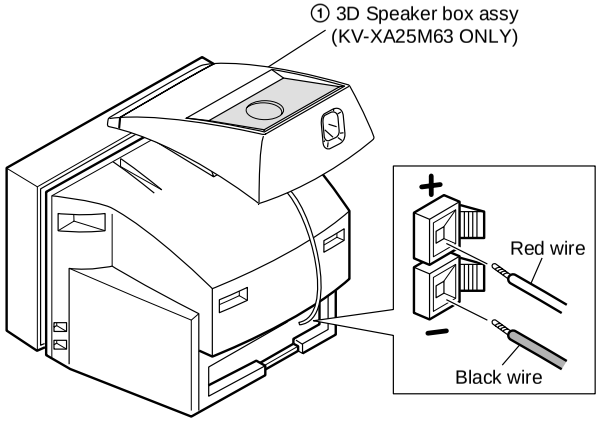
遙控器



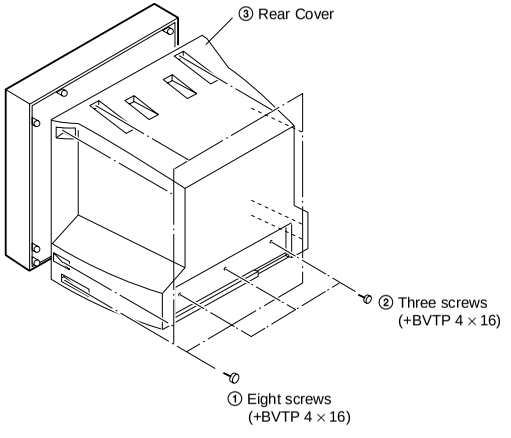
按鍵	功能	頁面
AUTO PROGRAM（自動頻道記憶）	自動預設頻道。	5
CABLE（有線電視）	收看有線電視節目。	5
ADD/ERASE（記憶／刪除）	手動預設頻道。	10
0 - 9	輸入號碼。	10
ENTER（頻道輸入）	確認所輸入的號碼。	10
POWER（電源）	接通或暫時切斷電視機電源。	11
CH +/–（頻道）	選擇頻道號碼。	11
VOL +/–（音量）	調整音量。	12
VIDEO（影音）	選擇電視或影音輸入。	12
TV（電視）	顯示電視節目。	12
MUTING（靜音）	消除聲音。	12
DISPLAY（顯示）	顯示畫面上的信息。	12
JUMP（回復）	跳回到之前收看的頻道號碼。	12
定時器設定		
WAKE UP（開機定時）	設定電視自動打開。	13
SLEEP（睡眠定時）	設定電視自動關閉。	13
PIC MODE（畫質模式）	選擇畫質模式。	14
SOUND MODE（音效模式）	選擇音效模式。	14
喜愛頻道操作		
FAVORITE	顯示喜愛頻道。	15
1 - 6	選擇所要的頻道。	15
SURROUND（環繞音效）	選擇環繞音效模式。	16
立體聲或雙語言操作		
MTS（音聲多重）	選擇立體聲或雙語言模式。	17
選單操作		
MENU（目錄）	顯示選單。	19
+ 或 –	選擇和調整項目。	19
RETURN（輸入）	確認被選的項目。	19

SECTION 2
DISASSEMBLY

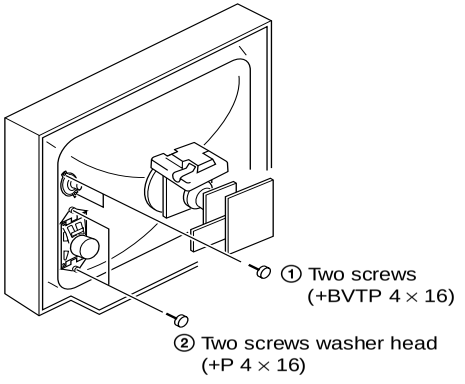
2-1. 3D SPEAKER BOX REMOVAL (KV-XA25M63 ONLY)



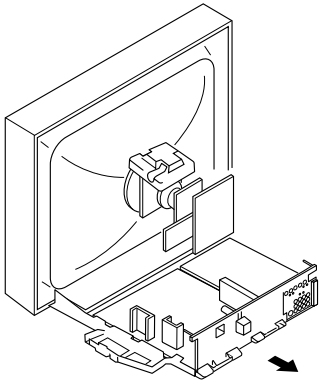
2-2. REAR COVER REMOVAL



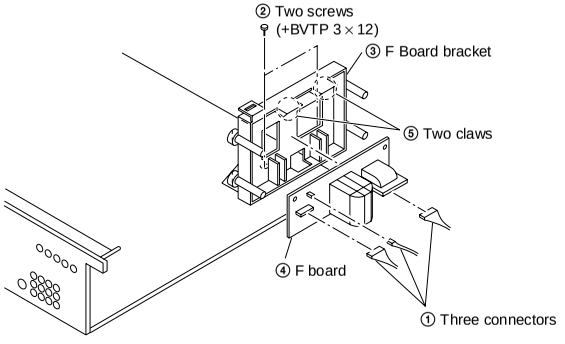
2-3. SPEAKER REMOVAL



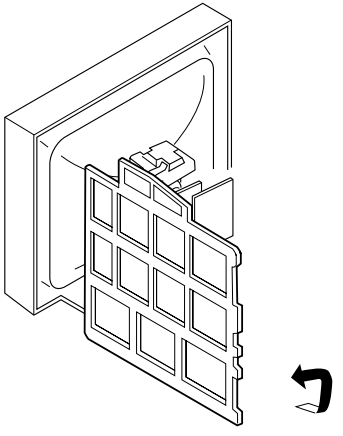
2-4. CHASSIS ASSY REMOVAL



2-5. F BRACKET REMOVAL



2-6. SERVICE POSITION



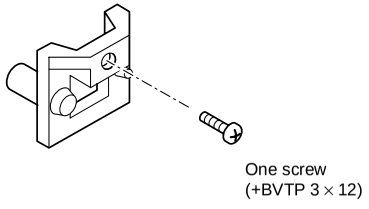
Note:

1. Undress necessary wires that creates tension while placing the chassis into Service Position.

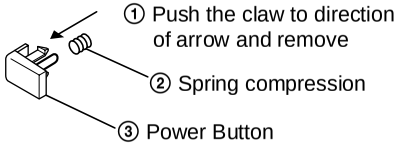
2-7. REPLACEMENT OF PARTS

2-7-1. Light Guide

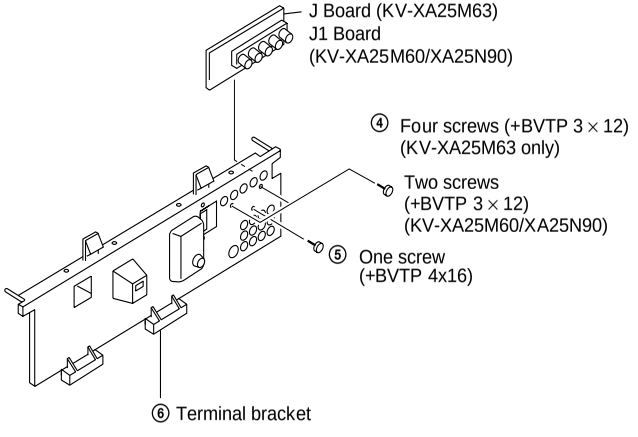
For replacement of light guide,unscrew them, exchange with new parts and fix them with screws respectively.



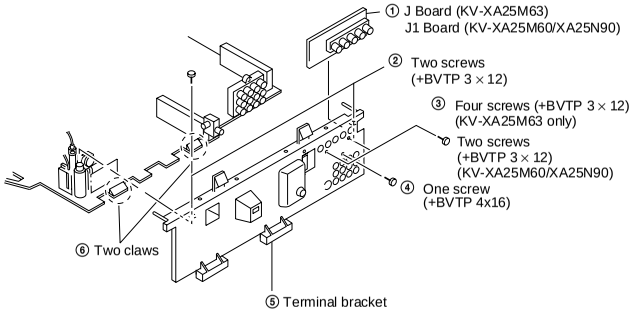
2-7-2. Power Button



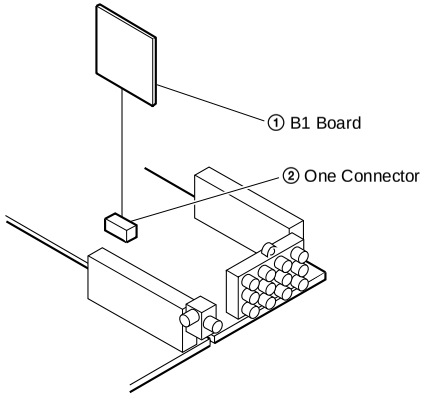
2-8. J AND J1 BOARDS REMOVAL



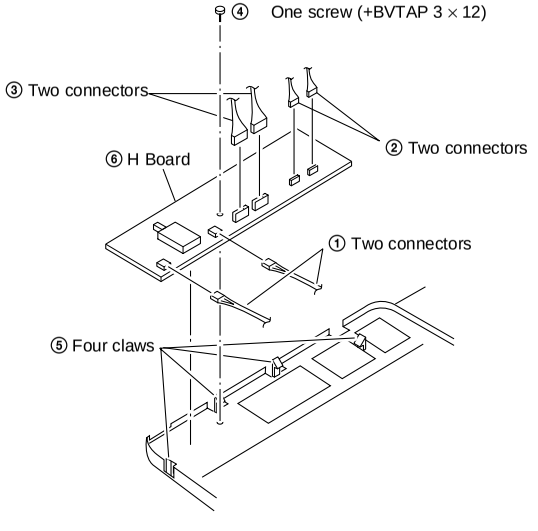
2-9. TERMINAL BRACKET REMOVAL



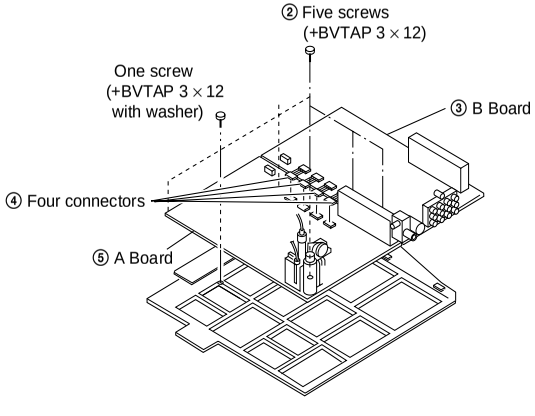
2-10. B1 BOARD REMOVAL



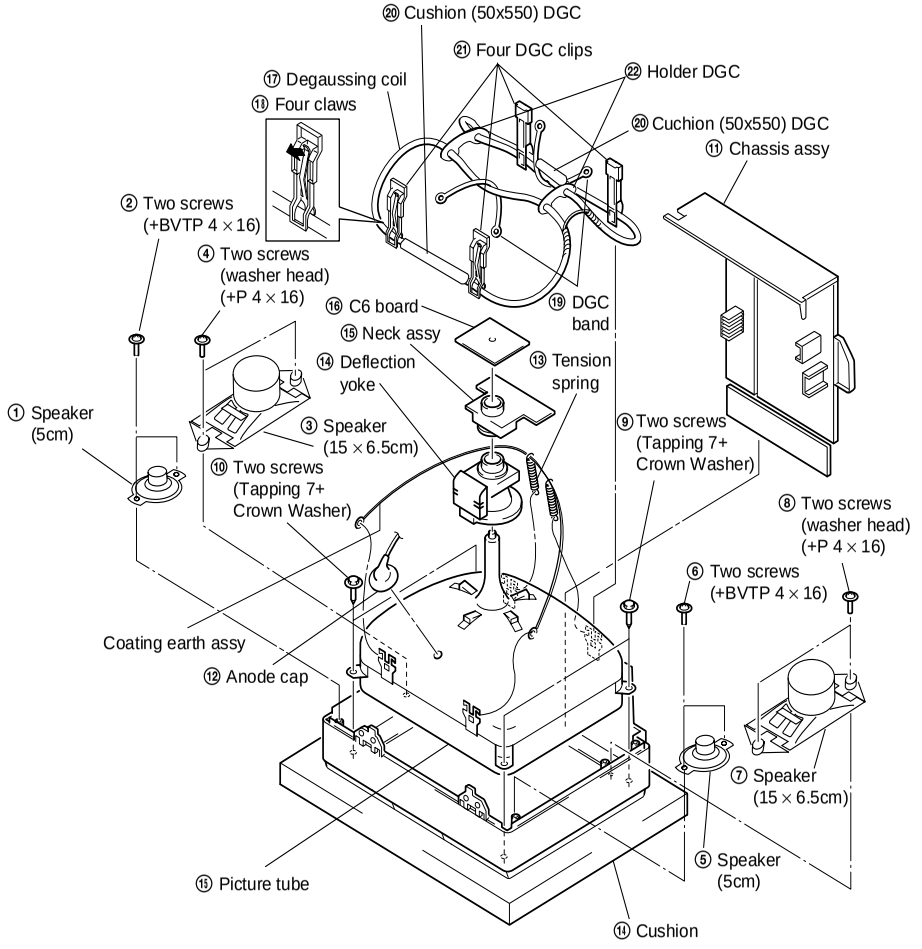
2-11. H BOARD REMOVAL



2-12. A AND B BOARDS REMOVAL



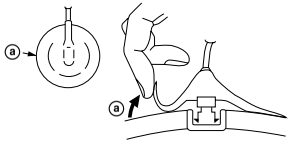
2-13. PICTURE TUBE REMOVAL


⑳ Cushion (50x550) DGC
㉑ Four DGC clips
㉒ Holder DGC
⑰ Degaussing coil
⑱ Four claws
⑳ Cuchion (50x550) DGC
⑪ Chassis assy
② Two screws (+BVTP 4 × 16)
④ Two screws (washer head) (+P 4 × 16)
⑯ C6 board
⑲ DGC band
⑮ Neck assy
⑭ Deflection yoke
⑬ Tension spring
① Speaker (5cm)
③ Speaker (15 × 6.5cm)
⑨ Two screws (Tapping 7+ Crown Washer)
⑩ Two screws (Tapping 7+ Crown Washer)
⑧ Two screws (washer head) (+P 4 × 16)
⑥ Two screws (+BVTP 4 × 16)
Coating earth assy
⑫ Anode cap
⑦ Speaker (15 × 6.5cm)
⑤ Speaker (5cm)
⑮ Picture tube
⑭ Cushion

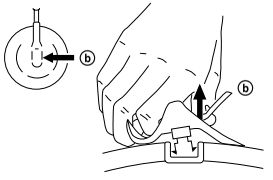
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

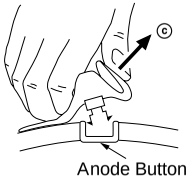
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



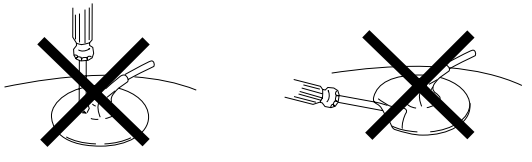
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.

• HOW TO HANDLE AN ANODE-CAP

① Do not damage the surface of anode-caps with sharp shaped objects.
② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.
③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.



SECTION 3
ADVANCE OPERATION

3-1. "RESET" FUNCTION

1. Purpose

If a customer faces some setting problem that cannot be solved, using the "RESET" function some items will be reset to its original setting (shipment condition)

2. How to Operate

The way to access to the "RESET" Function:-

a) By pressing "MENU" button or "SELECT" button (for non-menu models) on the Front Key Input and hold it down for 5 seconds.

3. Subsequent of Operation

Sequential to the resetting operation (either methods being used in No. 2), TV set would shut down once and automatically turn on again. The power-off duration is expected to be about 500msec. An OSD message, "RESET" tentatively will be displayed for 10 sec after IK status gets stable.
As a result, some items will be reset to an initial condition (shipment condition) wheareas some other remains at the last selection by user.

Items that remains at the last selection by user

Program No., Favourite CH Setup, PIC rotation, OSD Language, Fine tuning, TV System, Skip

Reset Items

Video input	RF	Color system(RF)	AUTO*
Volume	30	Antenna sensitivity	HIGH*
Picture mode	DYNAMIC	Stereo mode	STEREO/NICAM* (KV-XA25M60/XA25M63) STEREO/SAP (KV-XA25N90)
Sound mode	DYNAMIC	Bilingual mode	MAIN* (KV-XA25M60/XA25M63 only)
Surround mode	OFF	High-deviation mode	AUTO*
Color system(video)	AUTO	Child lock	OFF*
Multi picture(PIP) *1	OFF	Wide mode	OFF
PIP position *1	Bottom-right	Game mode *1	OFF
Favourite CH mode	AUTO	Teletext mode *1	OFF
OSD recall	OFF	Sleep timer	OFF
Intelligent volume	OFF	Wake-up timer	OFF
ECO mode *1	OFF	Sound muting	OFF

* = only when in RF mode
*1= Not used for these models

SECTION 4
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal

BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

4-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast, Brightness } normal
2. Position neck assy as shown in Fig4-1.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 4-2 through 4-4.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 4-2.)
6. Switch the raster signal to blue, then to red and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 4-5.)

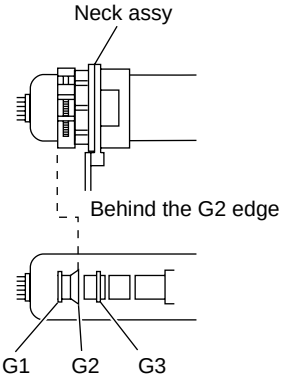


Fig. 4-1

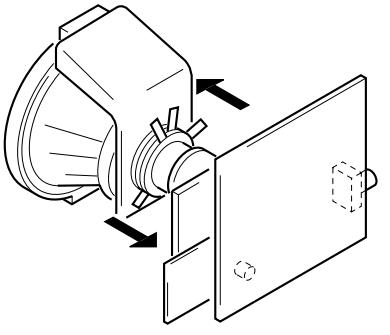


Fig. 4-2

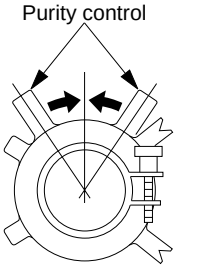


Fig. 4-3

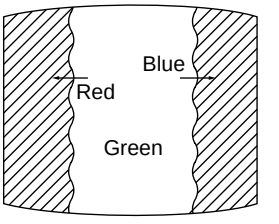


Fig. 4-4

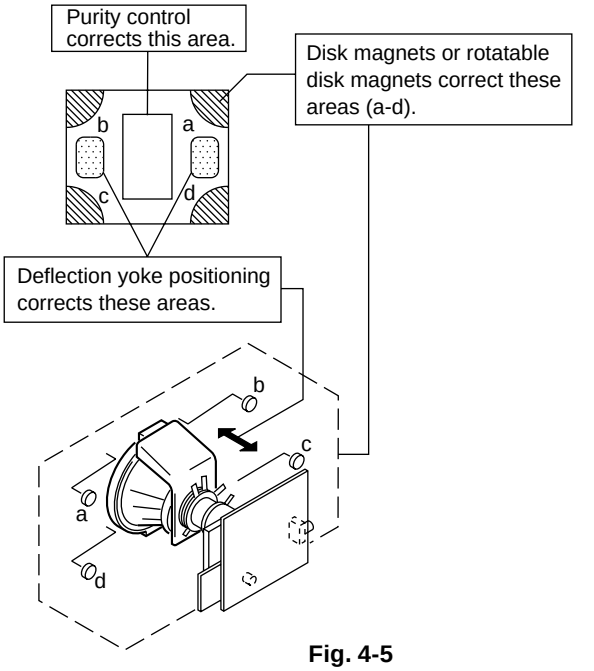


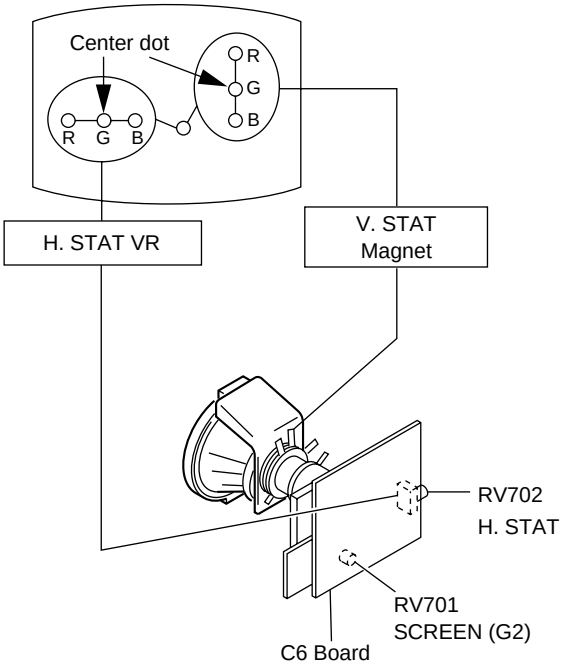
Fig. 4-5

4-2. CONVERGENCE

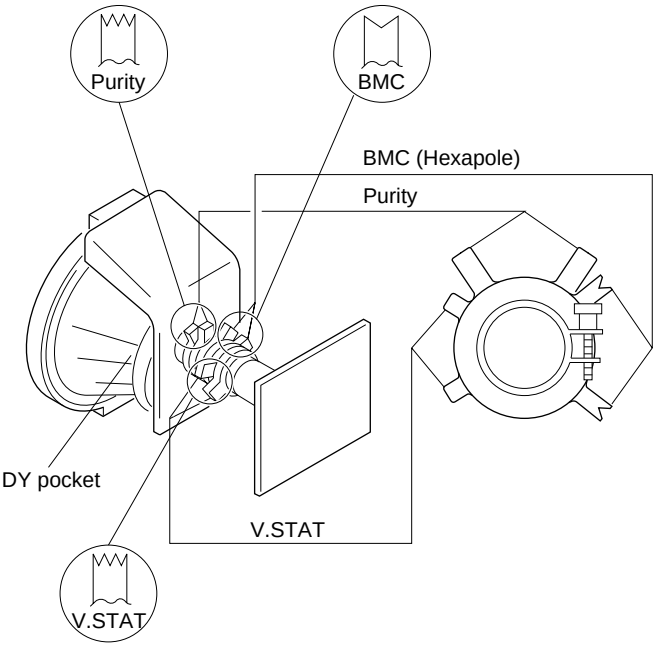
Preparation :

- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Receive dot/hatch signal.
- Pic mode: Personal (Pic 90%, Brightness 50%, Col 50 %, Hue 50%, Shp 50%).

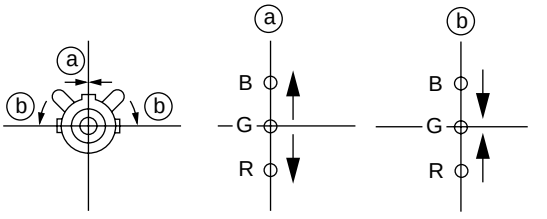
(1) Horizontal and Vertical Static Convergence



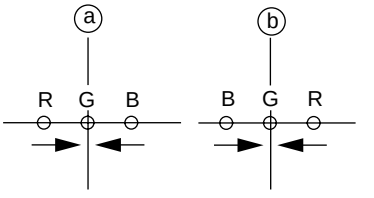
1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)



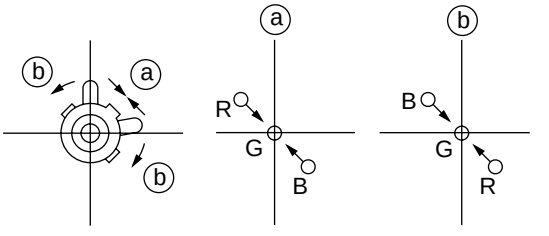
① V. STAT



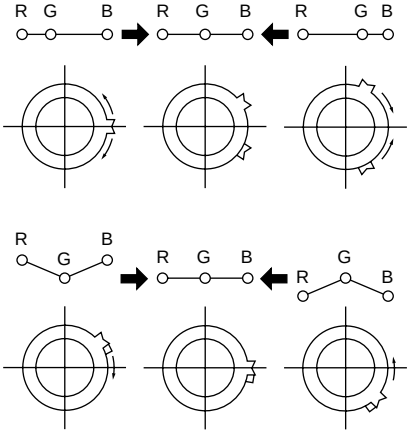
② H. STAT VR

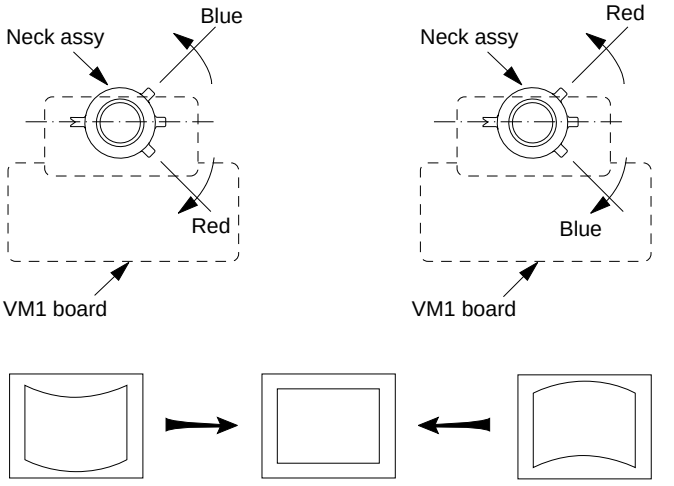


③



④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.





Note

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

⑤ Y separation axis correction magnet adjustment.

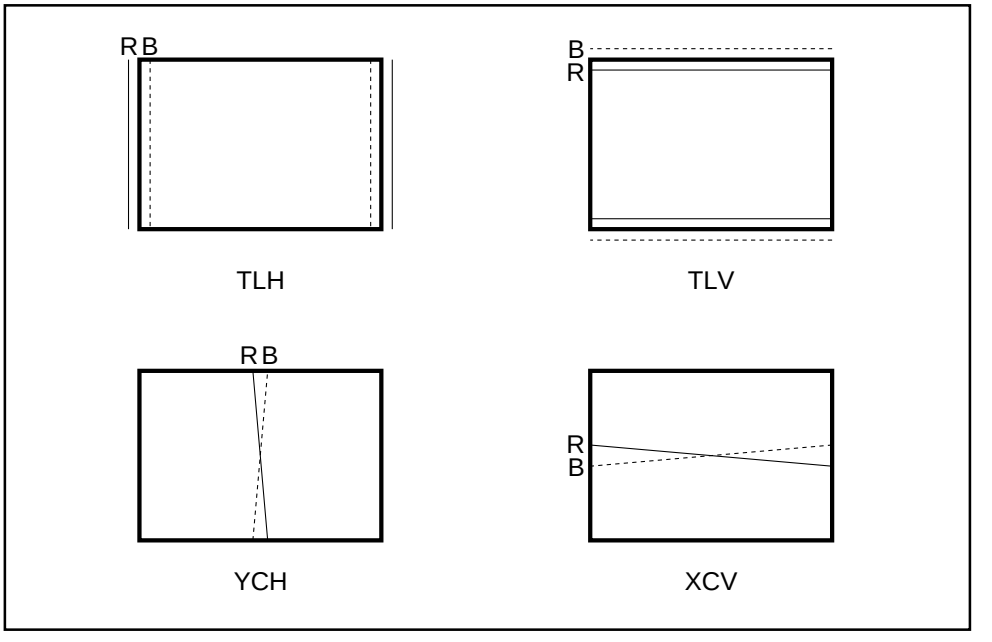
1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .

2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.

(2) Dynamic Convergence Adjustment

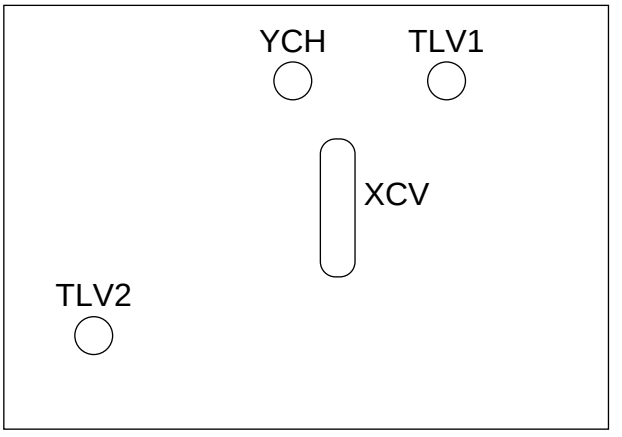
Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence

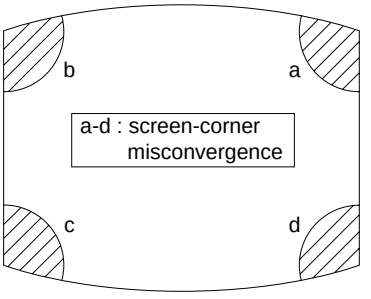


TLV	Rotate	TLV-2	VOL (29”, 34”) on DY
	Rotate	TLV	VOL (25”) on DY
XCV	Rotate	XCV	Adj core on DY
YCH	Rotate	YCH	VOL on DY
TLH	Insert	TLH	Correction Plate to DY Pocket (Left or Right)

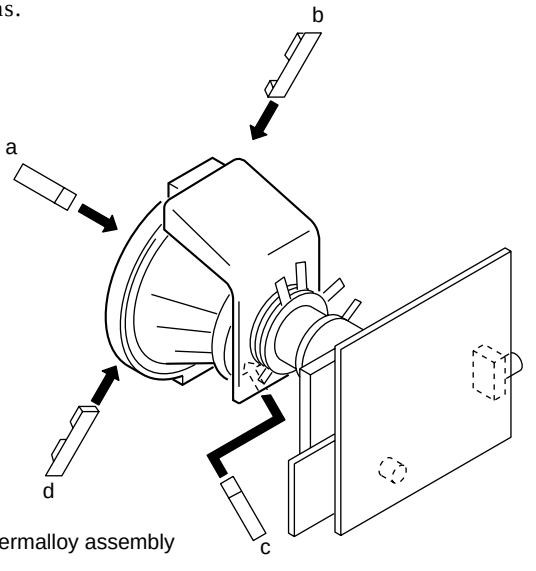
ON DY:



(3) Screen-corner Convergence



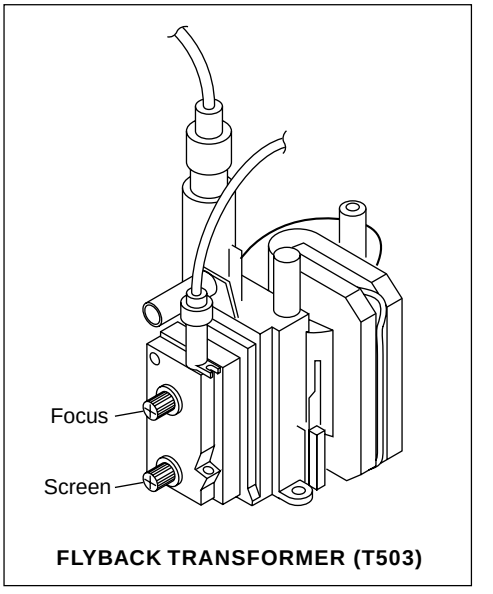
Fix a Permalloy assy corresponding to the misconverged areas.



4-3. FOCUS ADJUSTMENT

FOCUS adjustment should be completed before W/B adjustment.

1. Receive digital monoscope pattern.
2. Set "Picture Mode" to "DYNAMIC".
3. (a) Adjust figure VR so that the center of screen becomes just focus (except 25").
   (b) Adjust focus VR so that the lion teeth becomes just focus (25" only).
4. Change the receiving signal to white pattern and blue back.
5. Confirm magenta ring is not noticable. Incase magenta ring is obvious, adjust FOCUS VR to balance between MAGENTA RING and FOCUS.

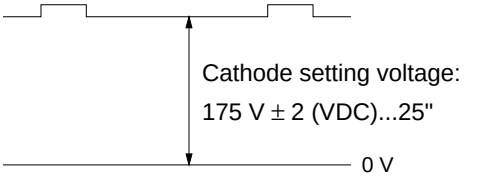


FLYBACK TRANSFORMER (T503)

4-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the C6 board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Adjust G2 (screen) on the FBT until picture shows the point before cut off.

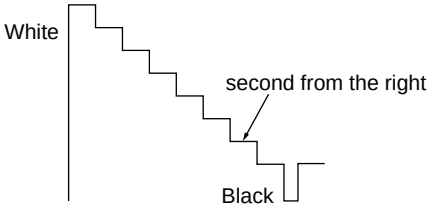


2. WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 5-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set the PICTURE to minimum.
4) Select GCT (WHB 4) and BCT (WHB 5) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
5) Set the PICTURE to maximum.
6) Select GDR (WHB 1) and BDR (WHB 2) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].

3. SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Input a staircase signal of black to white from the pattern generator.
3) BRIGHTNESS .... 50%.
   PICTURE ..... MINIMUM
4) Select SBR (WHB7) with [1] and [4], and adjust SBR (WHB7) level with [3] and [6] so that the second stripe from the right is dimly lit.



SECTION 5
CIRCUIT ADJUSTMENTS

5-1. ADJUSTMENTS WITH COMMANDER

Service adjustments to this model can be performed using the supplied Remote Commander RM-914 and RM-954.

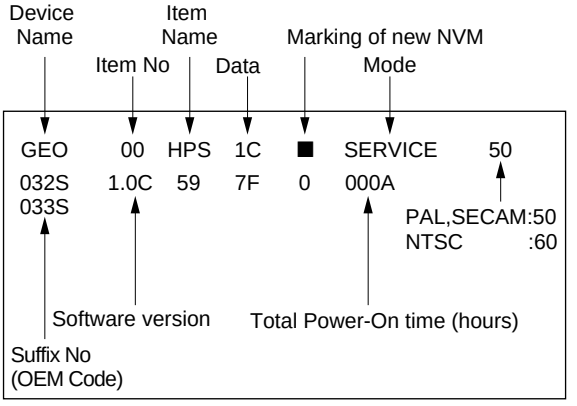
a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

This operation sequence puts the unit into service mode.

The screen display is :



b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

[1], [4]	Select the adjustment item.
↓	
[3], [6]	Raise/lower the data value.
↓	
[MUTING]	Writes.
↓	
[0]	Executes the writing.

[7], [0]	All the data becomes the values in memory.
[8], [0]	All user control goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[MUTING] + [0]	Write 50Hz adjustment data to 60Hz, or vice versa.
[2], [0]	Copy and write all data.

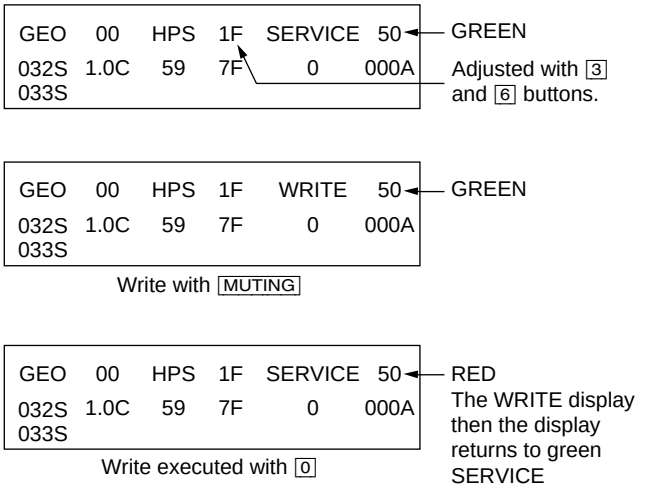
5-2. ADJUSTMENT METHOD

Item Number 00 of device GEO

This explanation uses H-Position as an example.

1. Select "GEO 00 HPS" with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

Example on screen display :-


GEO 00 HPS 1F SERVICE 50
032S 1.0C 59 7F 0 000A
033S
GREEN
Adjusted with 3 and 6 buttons.
GEO 00 HPS 1F WRITE 50
032S 1.0C 59 7F 0 000A
033S
GREEN
Write with MUTING
GEO 00 HPS 1F SERVICE 50
032S 1.0C 59 7F 0 000A
033S
RED
The WRITE display then the display returns to green SERVICE
Write executed with 0

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

TVG	Functionality		Range	Function	Table & Note	Device Name (Slave Address)	Remarks:
Category	No.	Name					Initial data for tables
GEO	00	HPS	3F	H Position	Normal(50/60)/Wide(50/60)	CXA2159S(88H)	1E (for 60Hz)
	01	HSZ	3F	H Size	Normal(50/60)/Wide(50/60)		typical
	02	PAP	3F	Pin Amp	Normal(50/60)/Wide(50/60)		typical
	03	TLT	0F	Trapezium	Normal(50/60)/Wide(50/60)		typical
	04	VPS	3F	V Position	Normal(50/60)/Wide(50/60)		typical
	05	VSZ	3F	V size	Normal(50/60)/Wide(50/60)		typical
	06	SCO	0F	S Correction	Normal(50/60)/Wide(50/60)		typical
	07	VLN	0F	V Linearity	Normal(50/60)/Wide(50/60)		typical
	08	BOW	0F	AFC Bow	Normal(50/60)/Wide(50/60)		typical
	09	AGL	0F	AFC Angle	Normal(50/60)/Wide(50/60)		typical
	0A	UPN	3F	Upper Pin	Normal(50/60)/Wide(50/60)		typical
	0B	LPN	3F	Lower Pin	Normal(50/60)/Wide(50/60)		typical
	0C	HBL	1	H Blanking on/off			typical
	0D	LBL	0F	Left H Blanking	Normal(50/60)/Wide(50/60)		0F(for 60Hz)
	0E	RBL	0F	Right H Blanking	Normal(50/60)/Wide(50/60)		typical
WHB	00	RDR	3F	R Drive	DYNAMIC/others	CXA2159S(88H)	2A (for non-DYNAMIC)
	01	GDR	3F	G Drive	DYNAMIC/others		typical
	02	BDR	3F	B Drive	DYNAMIC/others		typical
	03	RCT	0F	R Cutoff	SECAM/others		typical
	04	GCT	0F	G Cutoff	SECAM/others		typical
	05	BCT	0F	B Cutoff	SECAM/others		typical
	06	BMN	1F	Brightness Minimum Data			-
	07	SBR	3F	Sub Brightness Control			-
	08	APB	3	Sub Bright Control Switch for Intelligent Picture #3			-
SAJ	00	PMX	3F	Picture Maximum Data	non-Wide/Wide	CXA2159S(88H)	typical
	01	SHU	0F	Sub Hue Control	TV/Video		typical
	02	SSH	0F	Sub Sharpness Control	TV/Video		09 (for VIDEO)
	03	SCL	3F	Sub Color Control	(NTSC/others)/WIDE(NTSC/others)		typical

Adjustment Item Table

TVG	Functionality		Range	Function	Table & Note	Device Name (Slave Address)	Remarks:
Category	No.	Name					Initial data for tables
VP	00	EHT	0F	EHT Comp	50/60Hz	CXA2159S(88H)	typical
	01	GMA	3	Gamma Correction (sepatated in STANDARD mode)	NON-STD.(NTSC/others)/STD.(NTSC/others)		typical
	02	APG	1	Gamma Control Switch for Intelligent Picture #3	NON-STD.(NTSC/others)/STD.(NTSC/others)		-
	03	YDL	0F	Y Delay	PAL/SECAM/NTSC/DVD		(09/08/08 for SECAM/NTSC/DVD)
	04	SST	3	SECAM ID Start Position	SECAM&AUTO/FORCED-PAL&NTSC		(00 for forced PAL/NTSC)
	05	SSP	3	SECAM ID Stop Position	SECAM&AUTO/FORCED-PAL&NTSC		(03 for forced PAL/NTSC)
	06	RLM	3	RGB Limit			typical
	07	SLV	03	SECAM ID Level	SECAM&AUTO/FORCED-PAL&NTSC		(02 for forced PAL/NTSC)
	08	SBF	3F	SECAM BELL f0	SECAM&AUTO/FORCED-PAL&NTSC		(22 for forced PAL/NTSC)
	09	DYC	1	Dynamic Color on/off			-
	0A	ABL	1	ABL Mode Switching (except STANDARD mode)	except STANDARD		(00 for STANDARD)
	0B	VTH	1	ABL Detection Vth Switching			-
	0C	SFO	1	FO Switching for Sharpness	NTSC/others		typical
	0D	DCX	1	DC Trans. Ratio Switching			-
	0E	SHT	1	Pre-/Overshoot ratio Switch	NTSC/others		typical
	0F	HDW	1	H Drive Pulse Width Switch			-
	10	AFC	03	AFC Gain Control	TV/Video/Text		(00/01 for VIDEO/TEXT)
	11	HOS	0F	H Oscillation			-
	12	HSS	1	Slice Level of H Sync Sep.			-
	13	VSS	1	Slice Level of V Sync Sep.			-
	14	HMS	1	Macro Vision C/m off/on	50/60Hz		typical
	15	YUV	1	Y SEL			-
	16	CDV	3	CD mode for Video and RF under no signal	video only		-
	17	RON	1	R ON	not memorized		not memorized
	18	GON	1	G ON	not memorized		not memorized
	19	BON	1	B ON	not memorized		not memorized
	1A	PON	1	P ON	not memorized		not memorized
	1B	AXN	1	AXIS SW	NTSC/others (only for DYNAMIC)		-
	1C	RSL	1	RGB SEL			-
	1D	VBW	3	VBLKW			-
	1E	RFP	1	REFP			-
	1F	VMC	3	VM Level			-
AP	00	AGC	1	AGC On/Off Control		BH3868AFS(80H)	-
	01	SON	1	Surround On/Off			-
	02	SST	1	Surround Stereo			-
	03	SMO	1	Surround Monoral			-
	04	LOP	1	Surround Effect Enhancer			-
	05	SUR	7	Surround Effect			-
	06	BAS	1F	Bass Sound Mode Control	dyna/drama/soft		(10/10 for Drama/Soft)
	07	TRE	1F	Treble Sound Mode Control	dyna/drama/soft		(13/10 for Drama/Soft)
	08	TRF	3	Treble data offset			-
	09	BBE	FF	BBE Sound Mode Control	dyna/drama/soft		(D5/00 for Drama/Soft)

Adjustment Item Table

TVG	Functionality		Range	Function	Table & Note	Device Name (Slave Address)	Remarks:
Category	No.	Name					Initial data for tables
MSP	00	WST	FF	W/G Stereo Threshold		MSP3415D(84H)	-
	01	WBT	FF	W/G Bilingual Threshold			-
	02	WLL	FF	W/G Monaural Threshold			-
	03	WAC	0F	W/G Agreement Count			-
	04	WDL	FF	W/G Search Delay			-
	05	NDL	FF	NICAM Search Delay			-
	06	SDL	FF	Stereo Status Read Delay			-
	07	AGC	1	AGC Switch Auto/Constant			-
	08	REL	3F	AGC Gain at Constant Mode			-
	09	CRM	1	Carrier muting on/off			-
	0A	ACO	1	Audio Clock out on/off			-
	0B	FP	7F	FM Prescale for non-M system			-
	0C	FPM	7F	FM Prescale for M system			-
	0D	FH	7F	FM Prescale for HDEV			-
	0E	FHM	7F	FM Prescale for HDEV and M			-
	0F	WGP	7F	W/G Prescale			-
	10	NIP	7F	NICAM Prescale			-
	11	ERR	FF	Auto FM Switch Threshold			-
	12	VOL	FF	Loud Speaker gain 7000h to 7ff0h			-
SVP	00	SBF	3F	SECAM BELL f0		CXA2139S(8AH)	-
	01	HOS	0F	H Oscillation			-
	02	SHU	0F	Sub Hue Control	TV/Video		typical
	03	AFC	3	AFC Gain	TV/Video		typical
PIP	00	SDL	0F	Delay of Output SELECT		SDA9288X(D6H)	-
	01	PPH	FF	H Position of TOP-LEFT Pin P			-
	02	PPV	FF	V Position of TOP-LEFT Pin P			-
	03	YDL	7	Delay of Luminance Input			-
	04	HDI	0F	H Sync Delay for Inset			-
	05	ISC	1	Inset Clock Selection			-
	06	CLP	1	Clamp Pulse Selection			-
	07	CLC	1	Clamp Cycle Selection			-
	08	CON	0F	Contrast Adjustment for inset			-
	09	PLL	3	H Position For A-ch			-
	0A	PDV	0F	PIP V Pedestal Level			-
	0B	PDU	0F	PIP U Pedestal Level			-
TXT	00	TXH	3	Teletext Horizontal Position		SAA5261(58H)	-
	01	TXV	3	Teletext Vertical Position			-
OPM	00	OSH	3F	OSD H Position	Option-Misc	CXP750097(60H)	-
	01	COM	3	Comb Selection (0: None, 1: NTSC, 2: Digital, 3: 3D)			-
	02	APC	1	APC Switch			-
	03	TSY	3	TV Sys at Auto TV Sys			-
	04	MUT	1	No Signal Mute			-
	05	AFM	1	Auto FM Switch			-
	06	RFB	3	C-BPF Control			-
	07	TVO	7	Tilt to V-Angle Offset			-
	08	DBL	1	Disable Blueback Function			-
	09	SSO	3	Speed Search Option (0-Off, 1-4X, 2-6X, 3-8x)			-
OPB	00	OP1	FF	Optional Bits 1 (see the specified sheet)	Option-Bits	CXP750097(60H)	-
	01	OP2	FF	Optional Bits 2 (see the specified sheet)			-
	02	OP3	FF	Optional Bits 3 (see the specified sheet)			-
	03	OP4	FF	Optional Bits 4 (see the specified sheet)			-

NOTE

- shaded items are fixed data.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory. In case of a device replacement, adjustment by rewriting the data value is necessary for some items.
- The indication as "#" in OP2, OP3 and OP4 means that it would be referred Option Mode Data.

ITEM INFORMATION
No. OPB0 OP1

Item	XTAL 4.43	XTAL 3.58	SECAM	2nd. Lang	B/G	I	D/K	M
KV-XA25M60	1	1	1	1	1	1	1	1
KV-XA25M63	1	1	1	1	1	1	1	1
KV-XA25N90	1	1	1	1	0	0	0	1

APPLICABLE FOR XF-L (14" AND 21") MODELS ONLY

No. OPB1 OP2

Item	TOP	NICAM	HDEV	Thai Bil	Dis Fav.	DVD Input	AV Input	
KV-XA25M60	0	1	1	0	0	1	1	1
KV-XA25M63	0	1	1	0	0	1	1	1
KV-XA25N90	0	0	0	0	0	1	1	1

AV Input 00 = no AV Input 01 = 1 AV Input
10 = 2 AV Input 11 = 3 AV Input
DVD Input Effective only when "AV Input" is set to 3 AV Input
Dis Fav. Disable Favorite Channel (Effective For XF-L (21" & 14") Models Only)

No. OPB2 OP3

Item	PIC Rotate*1	2199 Curve*1	Auto PIC	Auto TV sys	US ST	AV Mono*1	11 KEY	Colour SW*2
KV-XA25M60	0	0	1	1	0	0	0	1
KV-XA25M63	0	0	1	1	0	0	0	1
KV-XA25N90	0	0	1	0	1	0	0	1

PIC Rotate*1 PIC Rotation Switch 0 = disabled, 1 = enabled
2199 Curve*1 2199 volume Curve Selection 0 = Others, 1 = 2199 Volume Curve.
Auto PIC*3 Auto Picture Improvement 0 = off PNC1/PNC2, 1= activate PNC1/PNC2
A-TVsys Auto TV System in Auto Program 0 = disabled, 1 = enabled
US ST* USA Stereo 0 = disabled, 1 = enabled
AV MONO*1 AV Mono model 0 = Stereo, 1 = Mono
(No Balance & Surround selection)
11 Key Front Key Selection 0 = 7 key model, 1 = 11 key model
Color SW*2 Color Data Selection in Dynamic Mode 0 = 65 (No PIP), 1 = 57 (PIP)

Note: *1 - For XA21/XH29 Models Only
*2 - For XA34/29/25 Models Only
*3 - For PNC3, the enables are from service item APG & APB

No. OPB3 *OP4

Item	PNC2	Korean ST	Vid NTSC3.58	Wide	Video3	Chinese	Arabic	Thai
KV-XA25M60	1	0	0	1	0	1	1	1
KV-XA25M63	1	0	0	1	0	1	1	1
KV-XA25N90	1	0	0	1	0	0	1	0

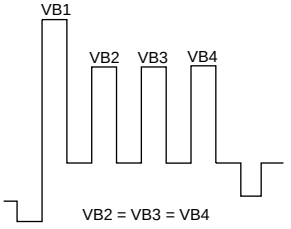
APPLICABLE TO XS ONLY - Sub Language Selection (Bit 0 - Bit 2)
Korean Stereo* Korean Stereo 0 = disabled, 1 = enabled
PNC2*2 Enable switch of PNC2 0 = disable, 1 = enable
Video NTSC3.58* Video Color System 0 = Multi System, 1 = Single System (NTSC3.58)
Wide Enable wide mode 0 = disable, 1 = enable

*Note : *APPLICABLE FOR NTSC MODELS ONLY

5-3. PICTURE QUALITY ADJUSTMENTS

SUB COLOR ADJUSTMENT

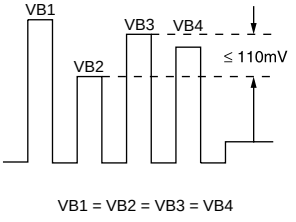
1. Select Video.
2. Input a PAL color-bar.
3. Set to the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
5. Set to Service Mode and select SAJ 3 'SCL' with [1] and [4] of the commander then adjust to VB2=VB3=VB4 with [3] and [6].
6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust SAJ 3 'SCL' as step 3 to 5 when receiving NTSC color-bar.
8. Select the 'Wide' mode, write the 'same data-3 steps' for both PAL and NTSC input.



VB2 = VB3 = VB4 (Difference is within 70mV)

SUB HUE ADJUSTMENT

1. Select Video 1.
2. Input a NTSC 3.58 color-bar, into Video.
3. Set the following condition:
   PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
5. Select SAJ 1 'SHU' with [1] and [4] of the commander by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6].



The highest level of VB1,VB2,VB3,VB4 must be aligned at the same line. Ideal difference level between VB2 and VB3 should be within ± 110mV.

6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust SAJ 1 'SHU' as step 3 to 6 when receiving TV mode.

5-4. DEFLECTION ADJUSTMENT

NORMAL MODE (50Hz)

1. Set to Service Mode.
2. Using the [1] and [4] button, select category GEO (Service Mode).
3. Raise/lower the data using the [3] and [6] buttons. Select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

WIDE MODE (50Hz)

4. Input PAL color bar.
5. Adjust condition change to WIDE MODE : ON.
6. Using the [1] and [3] button, select category GEO (Service Mode).
7. Copy (item from normal mode (50Hz)) adjusted data for the following item:
   Service Item

GEO :	01	HSZ	H POSITION
	05	VSZ	V POSITION
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY

8. Raise/lower data using [3] and [6] buttons, select and adjust the following items to obtain optimum image.
   Service Item

GEO :	00	HPS	H POSITION
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

9. After confirm WIDE MODE : ON – OFF.
10. Repeat same steps for NTSC input signal.

NORMAL MODE (60Hz)

11. Input 525/60Hz signal.
12. Using the [1] and [4] buttons select category GEO (Service Mode).
13. Select and adjust the following items to obtain obtimum image. Raise/lower the data with the [3] and [6] buttons.

Service Item

GEO :	00	HPS	H POSITION
	01	HSZ	H SIZE
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

WIDE MODE (60Hz)

14. Input monoscope signal.
15. Adjust condition change to WIDE MODE: ON.
16. Using the [1] and [4] button select category GEO (Service Mode).
17. Copy (item from NORMAL MODE (60Hz)) adjusted data for the following items:

Service Item

GEO :	01	HSZ	H SIZE
	05	VSZ	V SIZE
	06	SCO	S CORRECTION
	07	VLN	V LINEARITY

18. Raise/lower the data with the [3] and [6] buttons. Select and adjust the following items to obtain optimum image.

Service Item

GEO :	00	HPS	H POSITION
	02	PAP	PIN AMP
	03	TLT	TILT
	04	VPS	V POSITION
	08	BOW	AFC BOW
	09	AGL	AFC ANGLE
	0A	UPN	UPPER CORNER PIN
	0B	LPN	LOWER CORNER PIN

19. After confirm WIDE MODE : ON – OFF.

Note:

For Deflection Adjustment, set PICTURE MODE to "SOFT".

5-5. H-TRAPEZOID ADJUSTMENT

1. Receive cross hatch/dot signal.
2. Adjust RV1801 on C6 board to make H-Trapezoid distortion best.

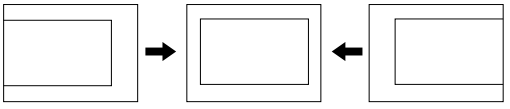
5-6. A BOARD ADJUSTMENT AFTER IC003 REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the fine adjustment.
   Write the data per each item number ([MUTING] +[0]).
4. Select item numbers “OPB00” (OP1), “OPB01” (OP2), "OPB 02" (OP3) and "OPB 03" (OP4) respectively set the bit per model with command buttons [3] and [6].
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory.
   (This will also cancel Service Mode.)

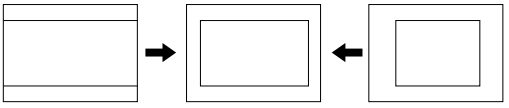
5-7. PICTURE DISTORTION ADJUSTMENT (1)

Item Number 00 – 0B

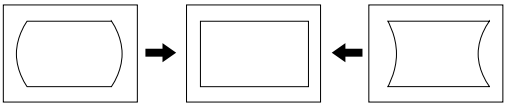
GEO 0 HPS (H POSITION)



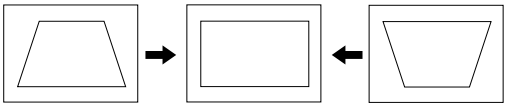
GEO 1 HSZ (H SIZE)



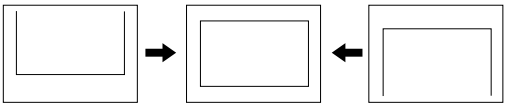
GEO 2 PAP (PIN AMP)



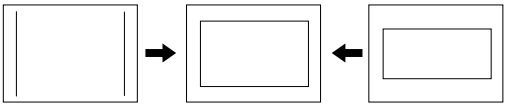
GEO 3 TLT (TRAPEZIUM)



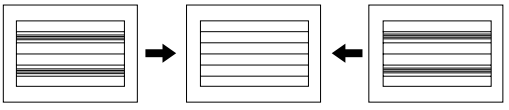
GEO 4 VPS (V POSITION)



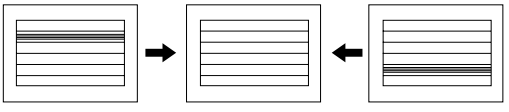
GEO 5 VSZ (V SIZE)



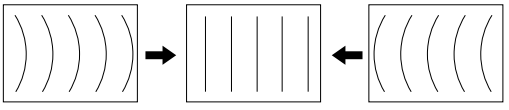
GEO 6 SCO (VERTICAL S-Correction)



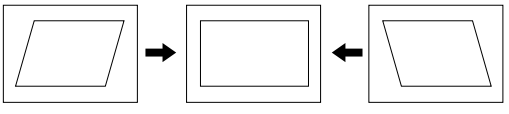
GEO 7 VLN (V LINEARITY)



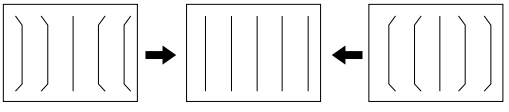
GEO 8 BOW (AFC.BOW)



GEO 9 AGL (AFC.ANGLE)

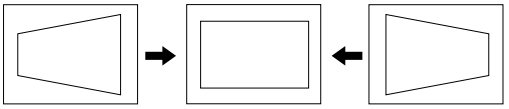


GEO 0A UPN (UPPER CORNER PIN)
GEO 0B LPN (LOWER CORNER PIN)



PICTURE DISTORTION ADJUSTMENT (2)

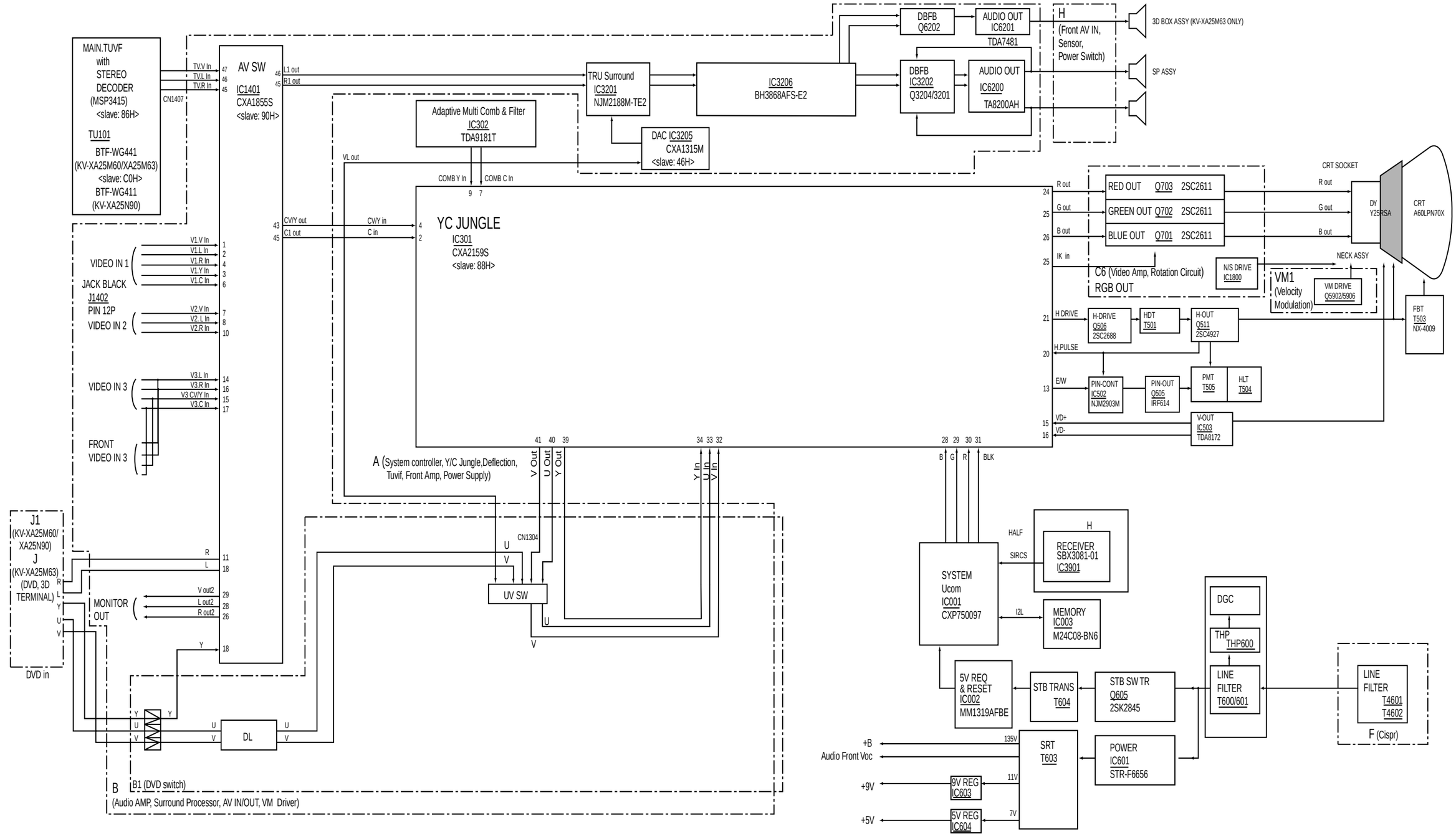
H-TRAPEZOID (DAC 4 HTR)



MEMO

SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM



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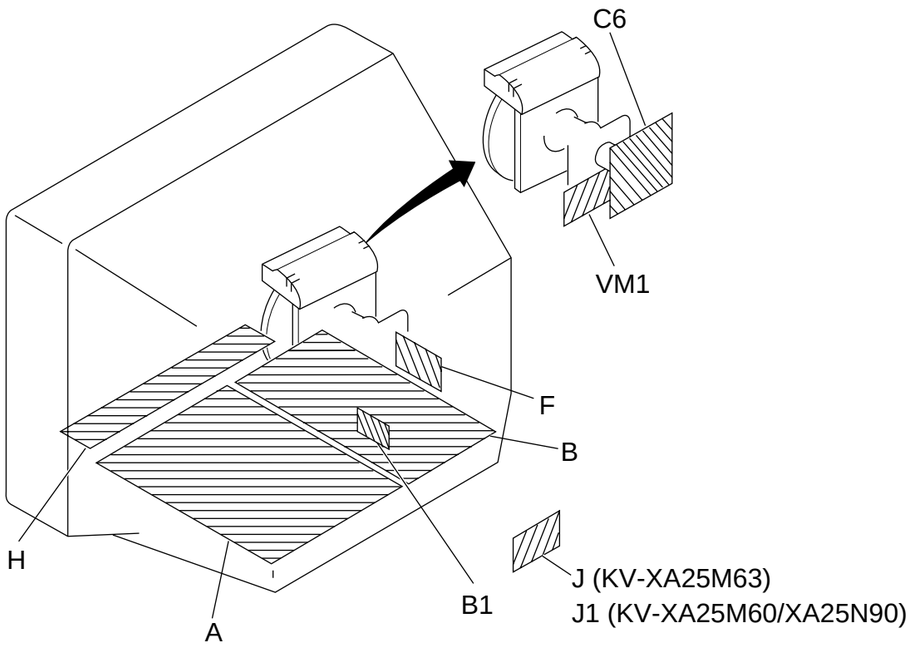
6-2. CIRCUIT BOARDS LOCATION



6-3. SCHEMATIC DIAGRAM

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- : internal component.
- : panel designation or adjustment for rrepair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Redings are taken with a color-bar signal input.**
  no mark : PAL
  ( ) : SECAM
  [ ] : NTSC 3.58
  << >> : NTSC 4.43
- **Readings are taken with a 10MΩ digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in Volts.**
- ✻ **: Cannot be measured.**
- **Circled numbers are waveform references.**
- **: B +bus.**
- **: B –bus.**
- **: signal path.**

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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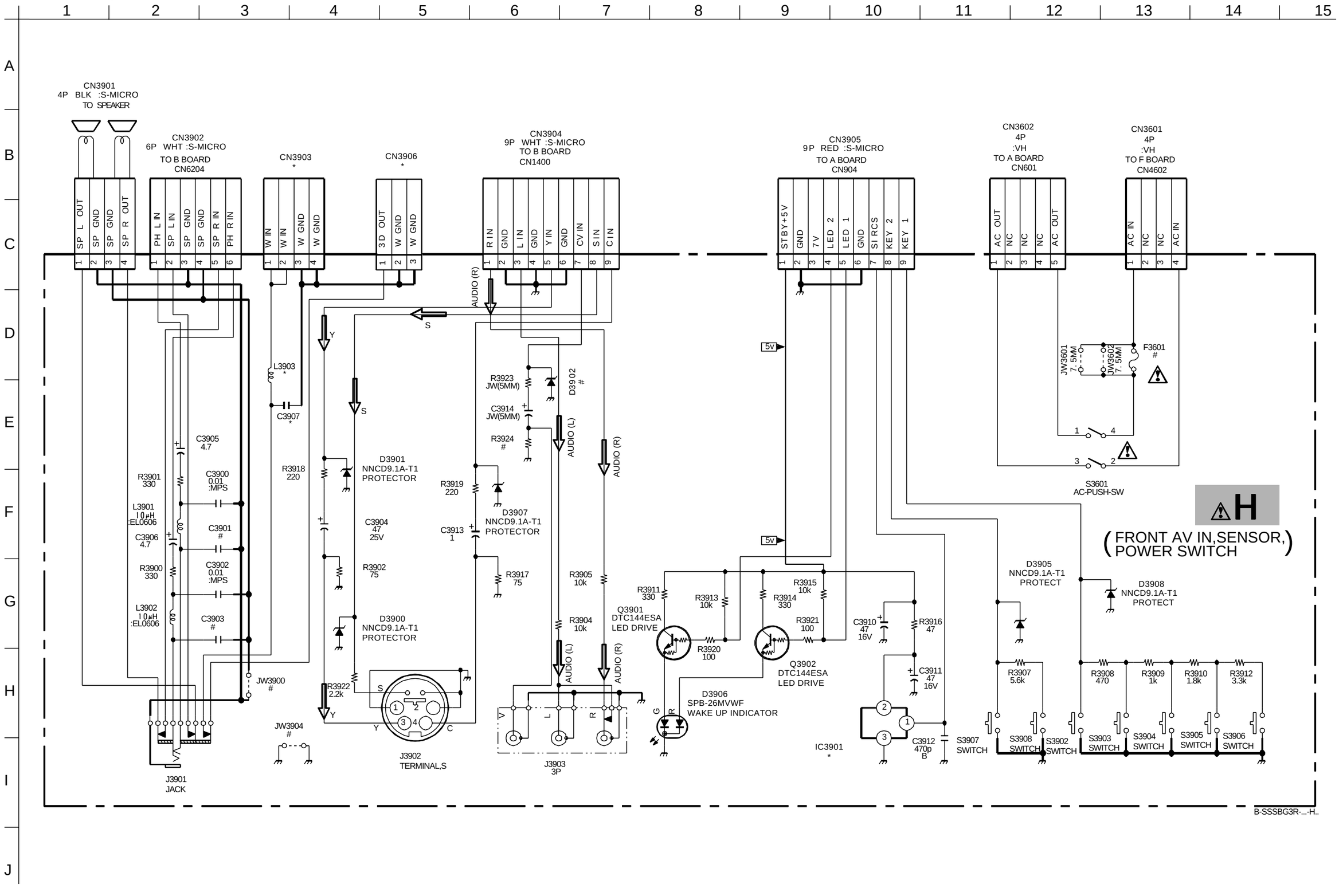
(1) Schematic Diagram of H Board



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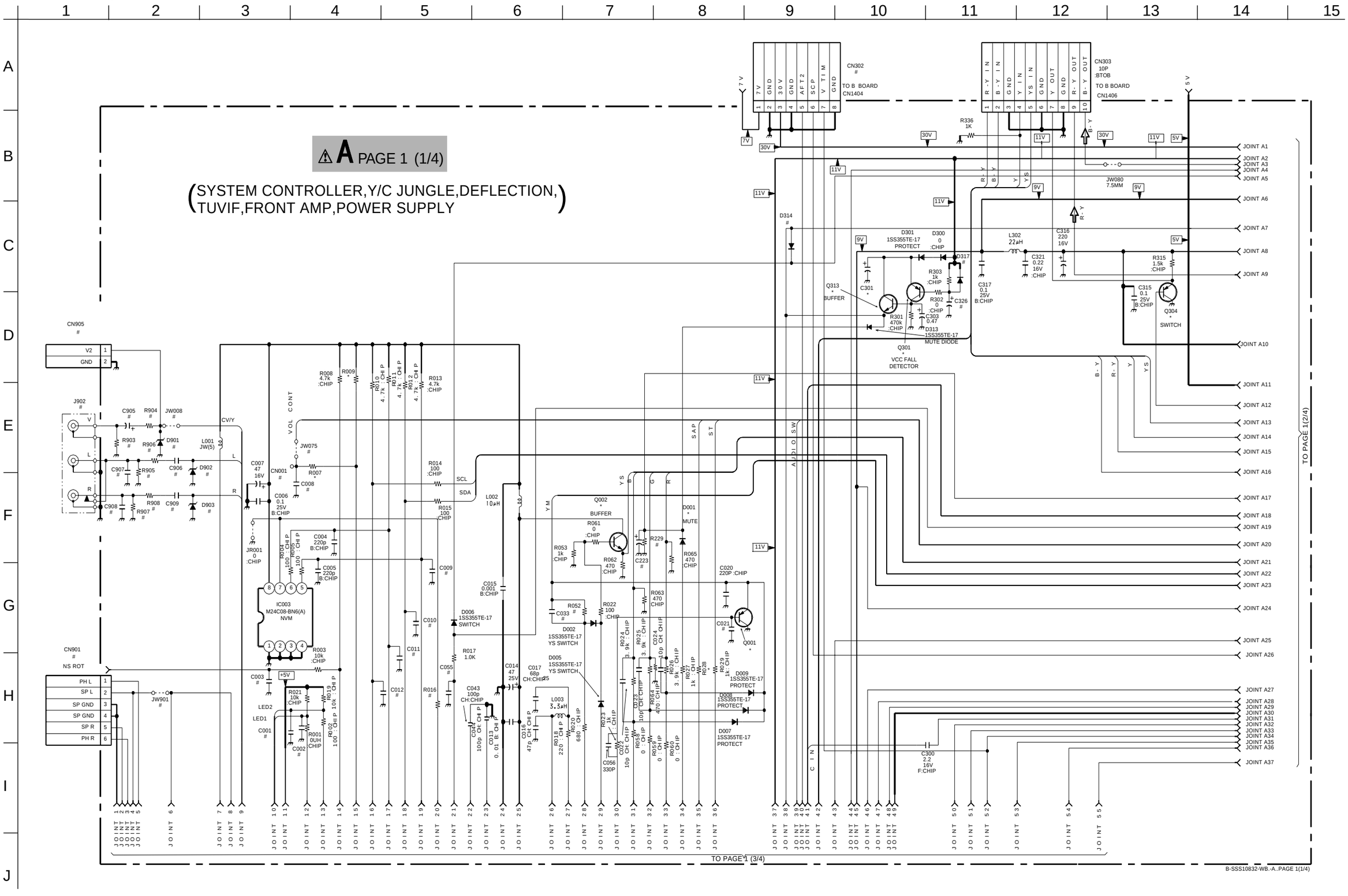
(2) Schematic Diagram of A and Board



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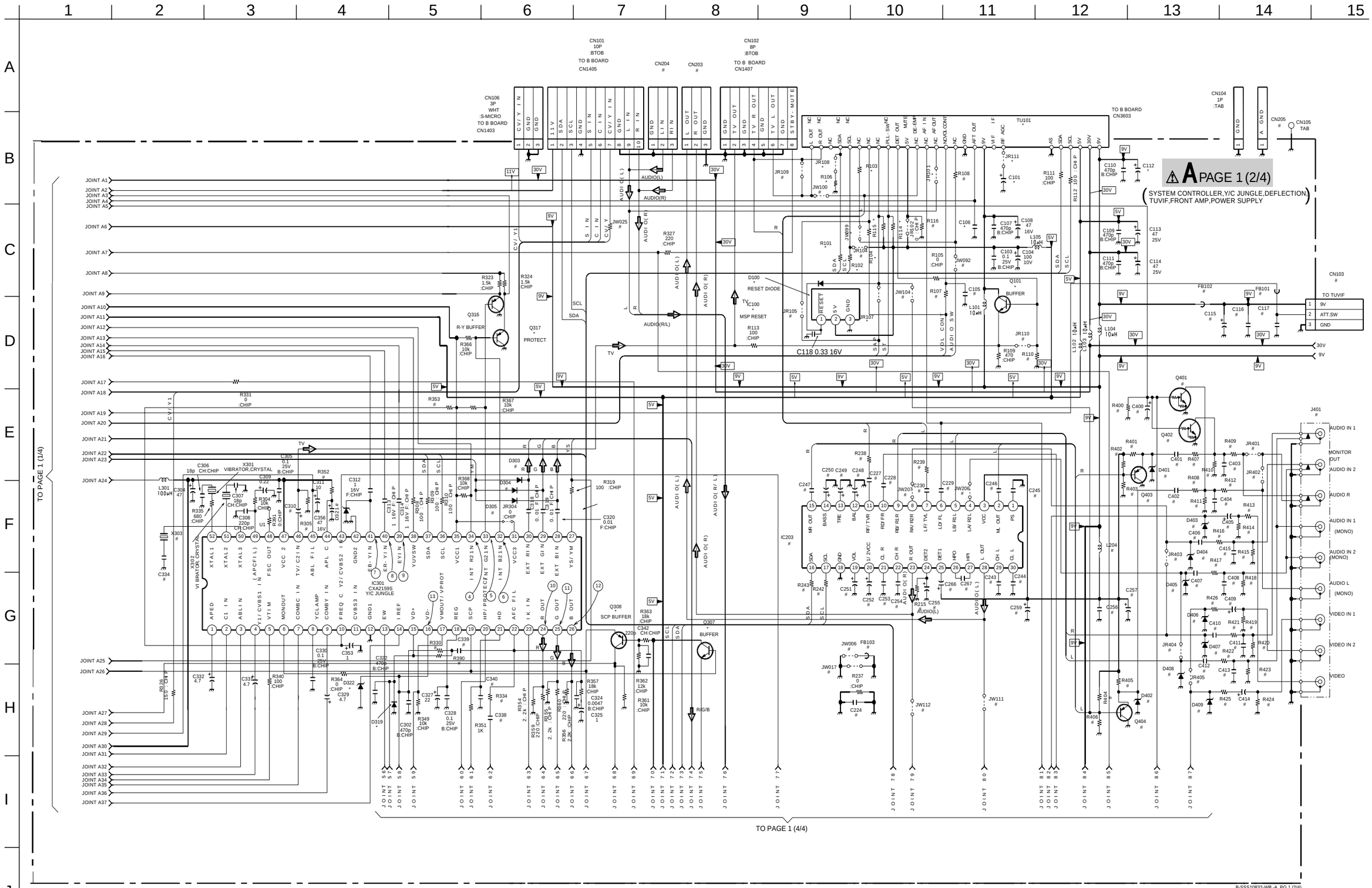

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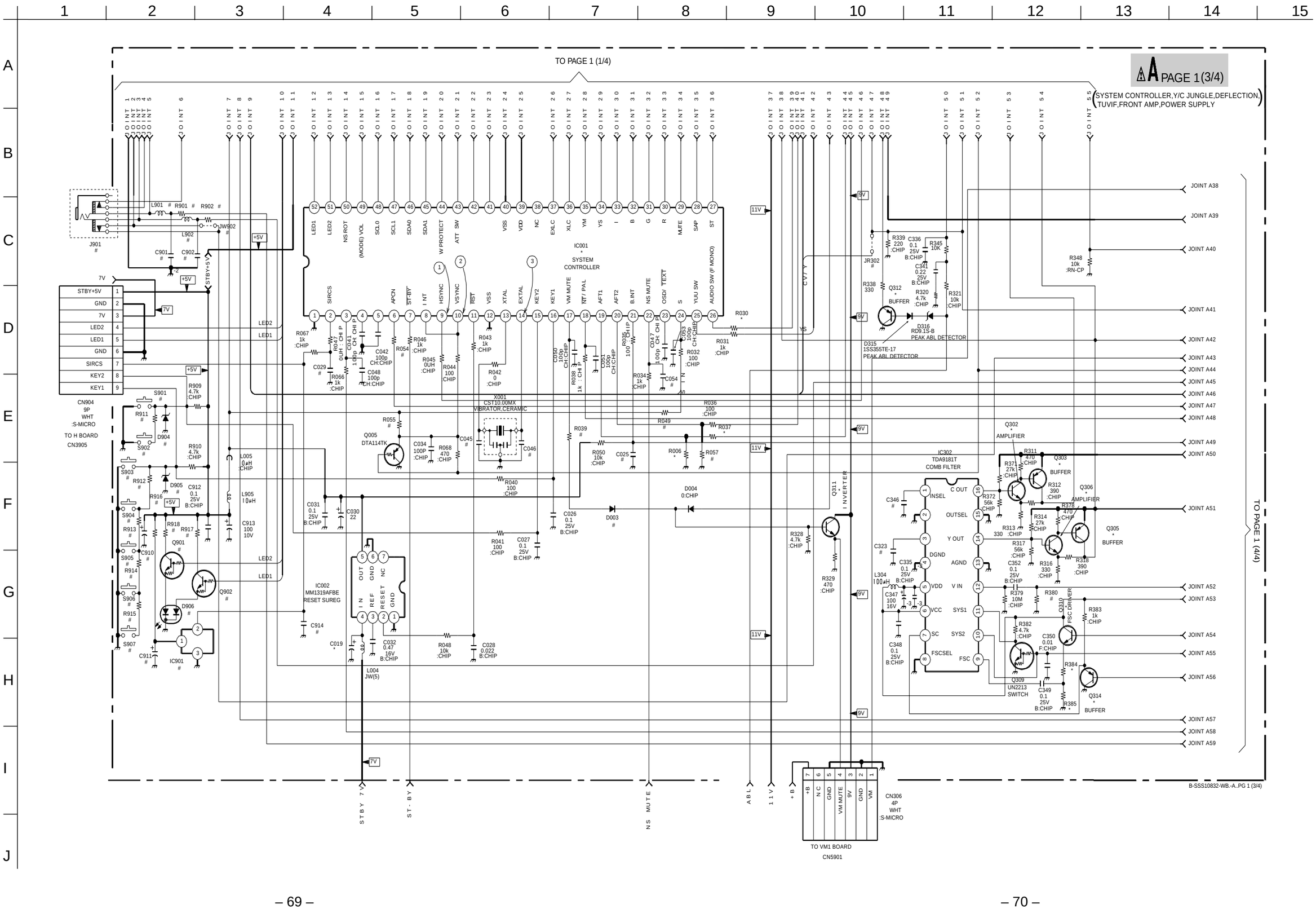
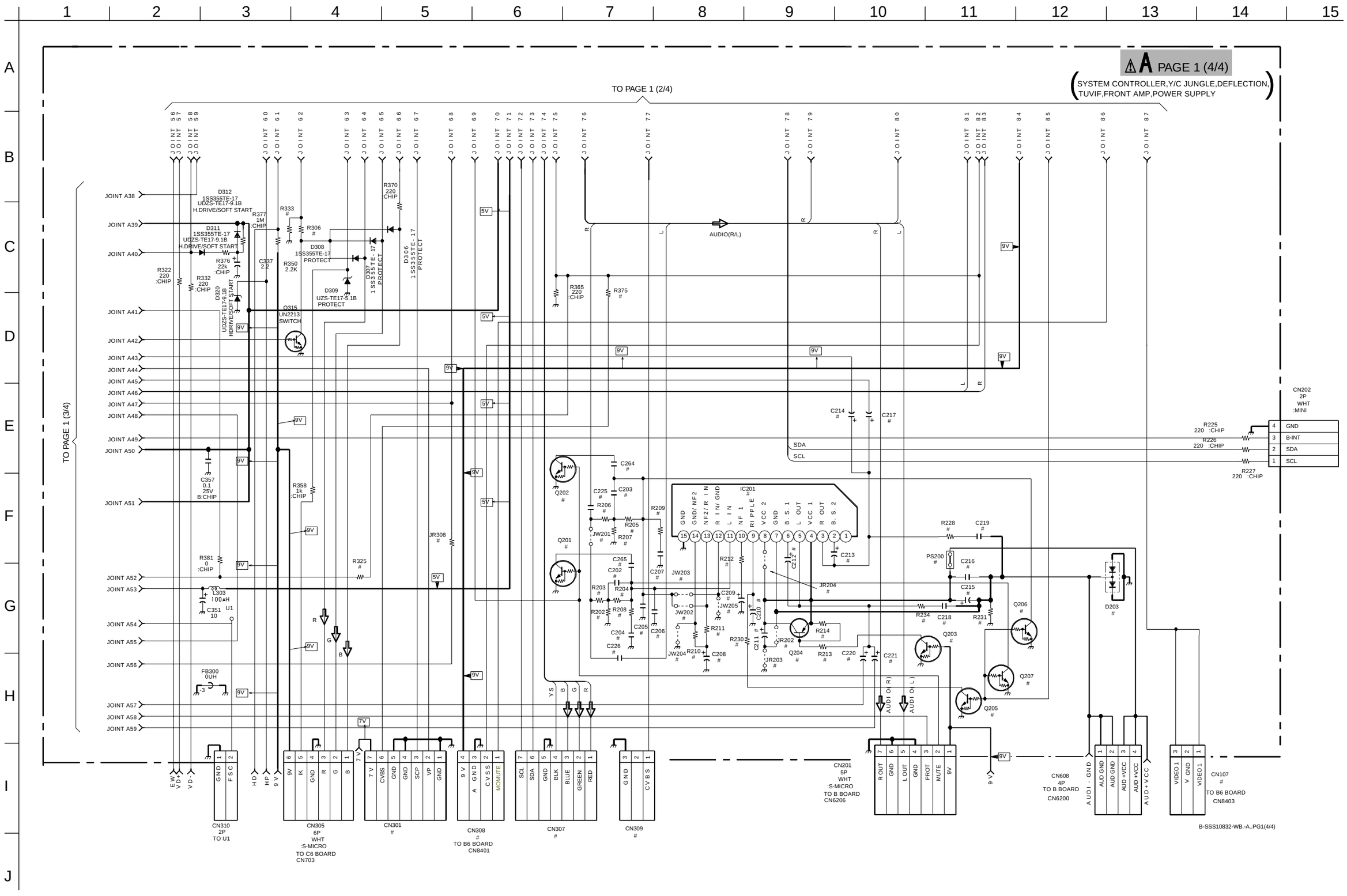


KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914



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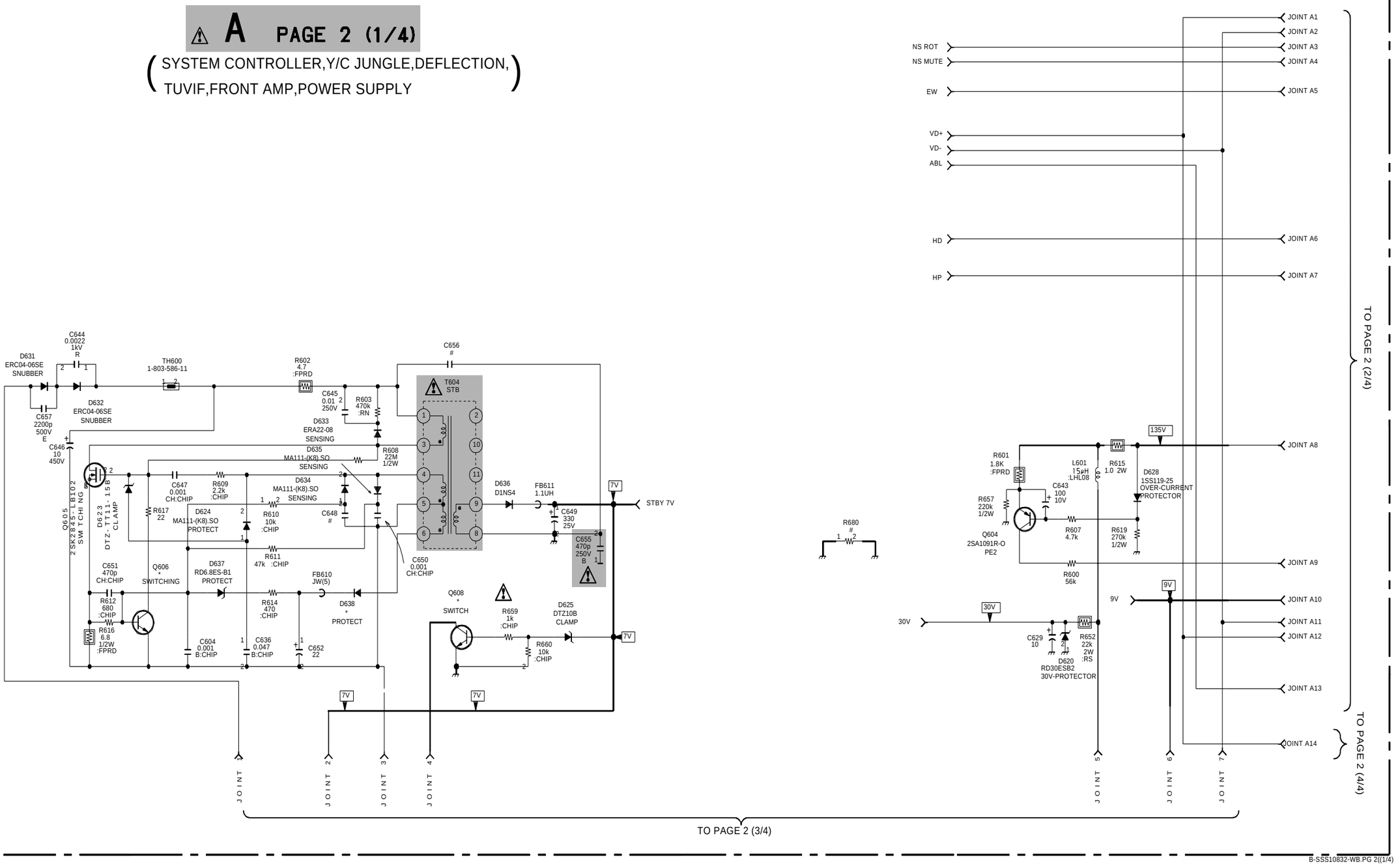
⚠ A PAGE 2 (1/4)

(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION,
TUVIF,FRONT AMP,POWER SUPPLY)

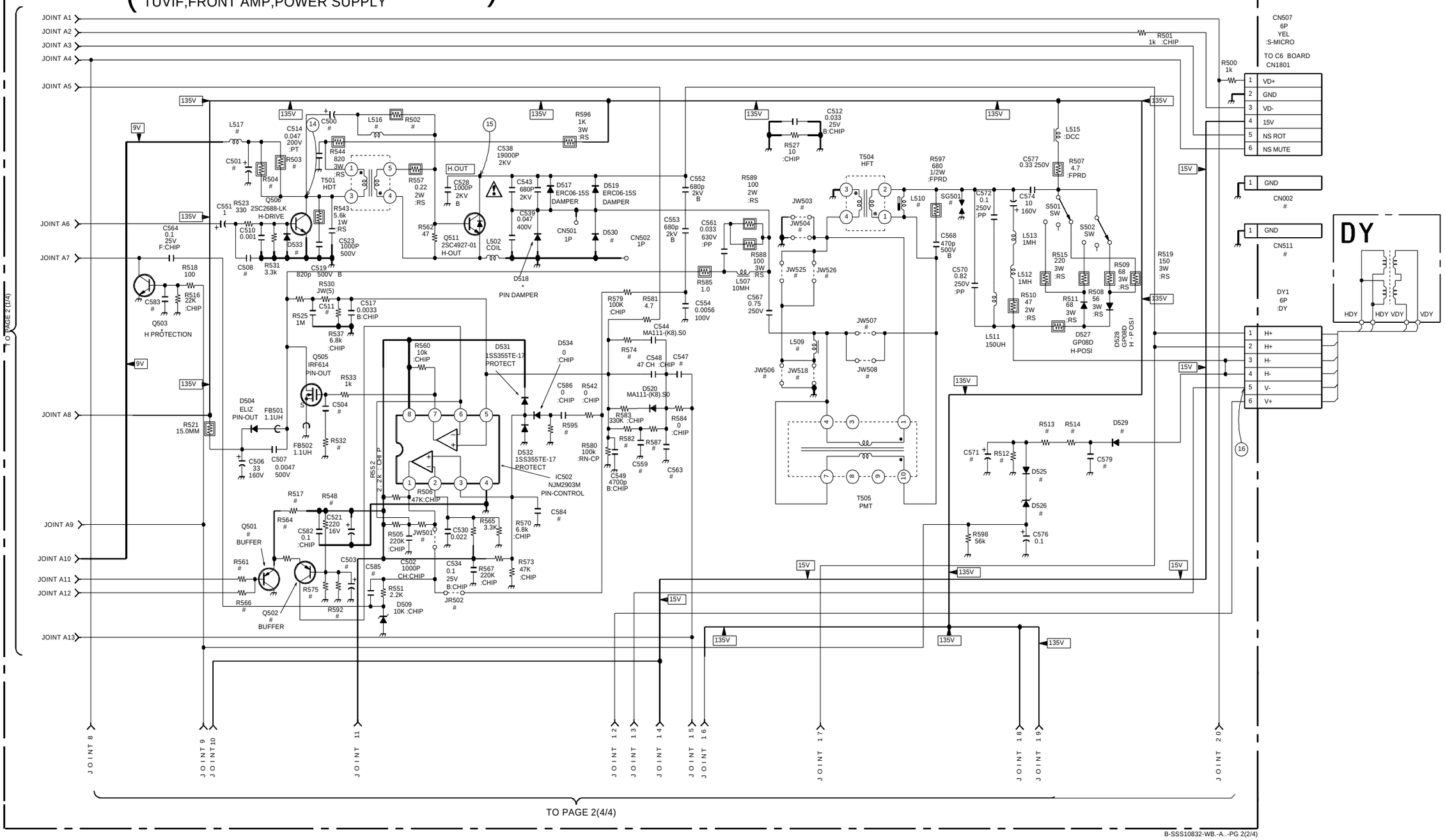


B-SSS10832-WB.PG 2((1/4)

KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914

⚠ A PAGE 2 (2/4)

(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION, TUVIF,FRONT AMP,POWER SUPPLY)



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⚠ A PAGE 2 (3/4)

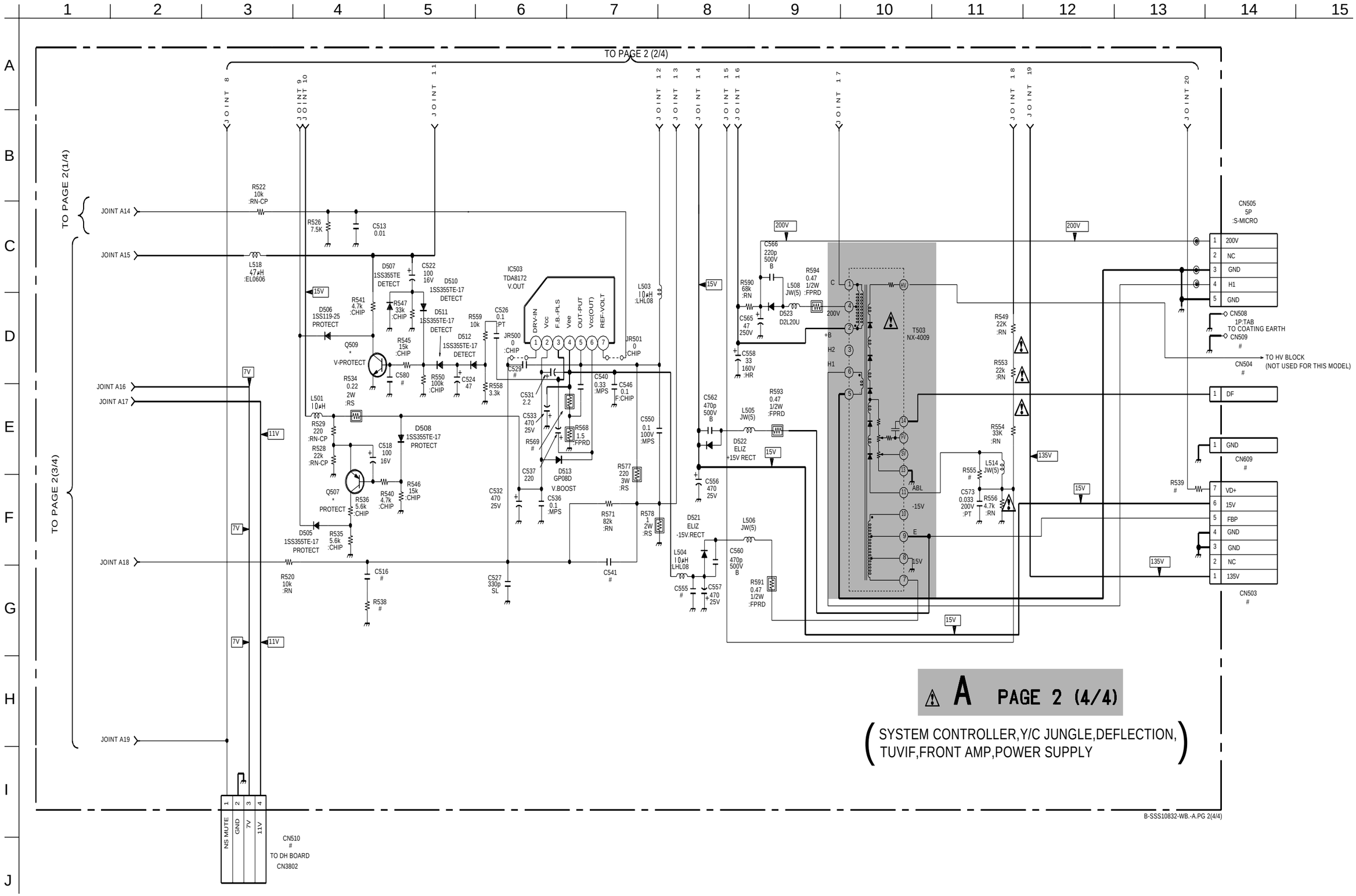
(SYSTEM CONTROLLER,Y/C JUNGLE,DEFLECTION, TUVIF,FRONT AMP,POWER SUPPLY)

TO PAGE2 (1/4)

TO PAGE 2 (4/4)

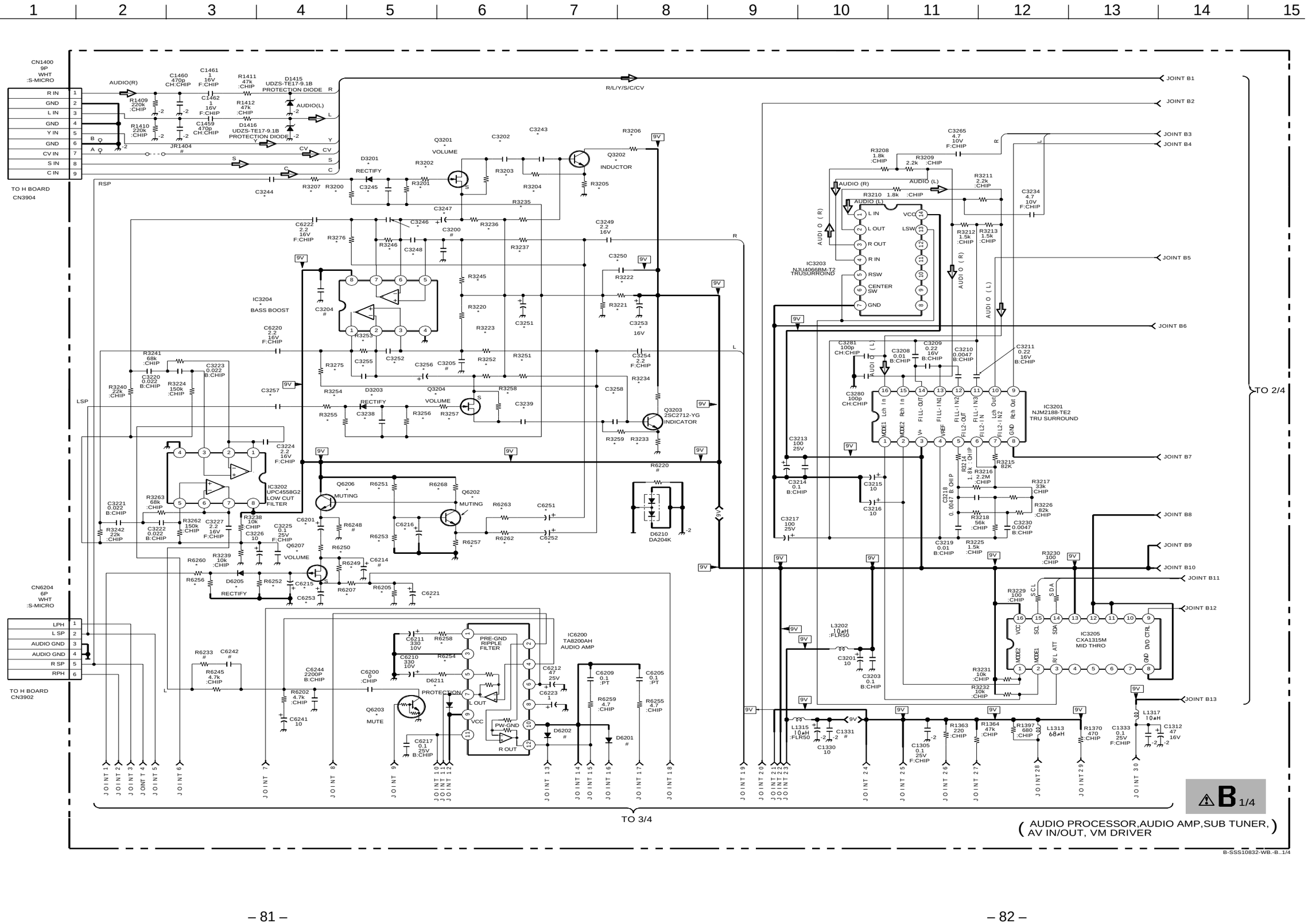
B-SSS10832-WB.A.PG 2(3/4)

KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914



KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914

(3) Schematic Diagram of B Board



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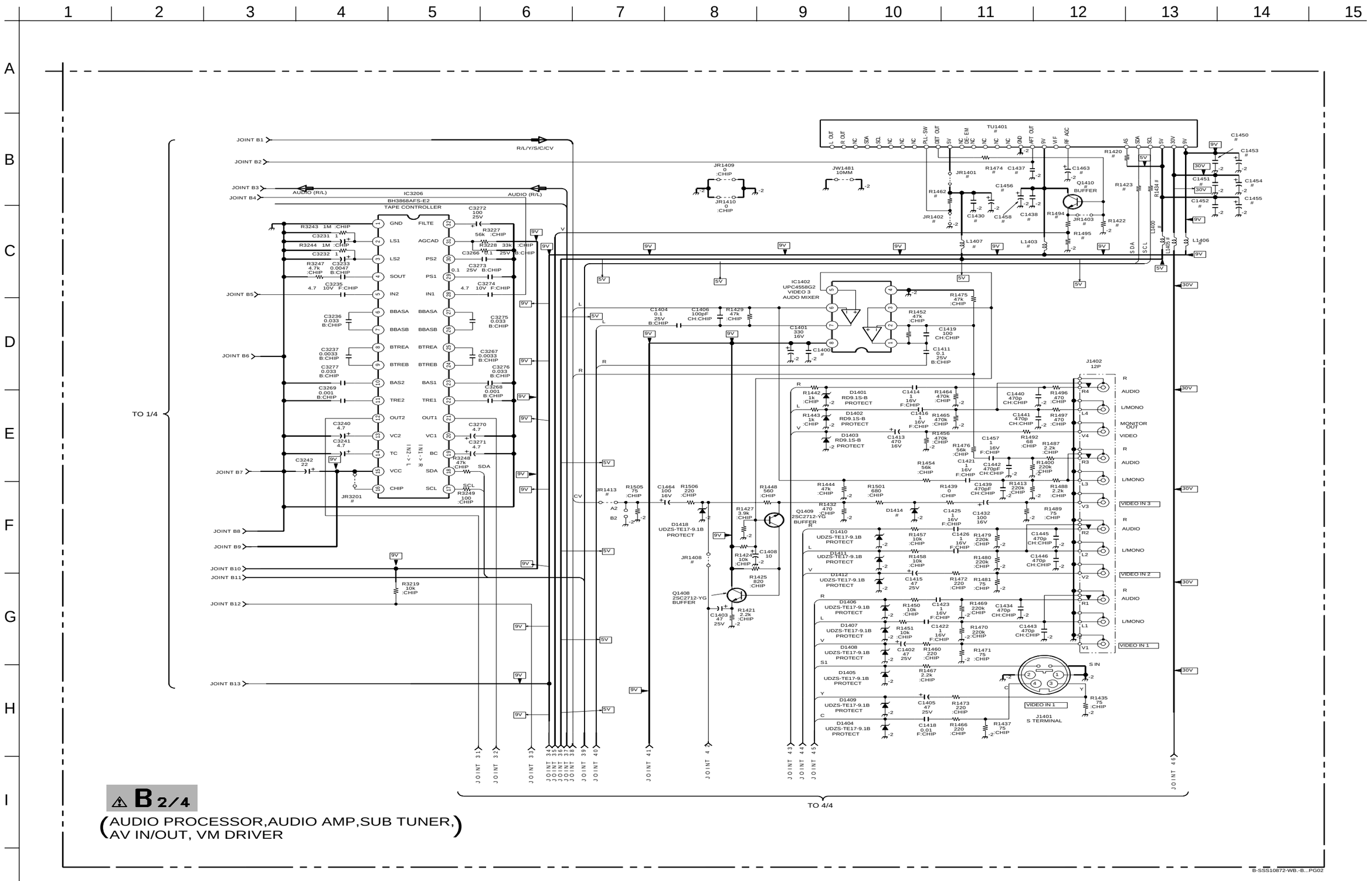


⚠ B 2/4

(AUDIO PROCESSOR,AUDIO AMP,SUB TUNER,
AV IN/OUT, VM DRIVER)

B-SSS10872-WB.-B...PG02

KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914

B 3/4

(AUDIO PROCESSOR, AUDIO AMP,SUB TUNER, AV IN/OUT, VM DRIVER)

TO 1/4

TO 4/4

CN6200 4P YEL :S-MICRO
AUDI GND 1
AUDI GND 2
AUDI +VCC 3
AUDI +VCC 4
TO A BOARD CN608

CN6202 4P
W OUT 1
W OUT 2
GND 3
GND 4
TO H BOARD CN3903

IC6201 * 3D AMP
OUT B/ D BOOT NC F/ C FREQ GND VCC IN MODE VCC VREG VCC VCC VCC

IC3200 μPC4558G2 AUDIO MIXER

IC1403 # REGULATOR

IC1404 NJM78M09FA REGULATOR

Q1316 2SA1162-G AMPLIFIER
Q1317 2SC2712-YG BUFFER
Q1323 2SC2712-YG AMPLIFIER
Q1324 2SC2712-YG PEAKING AMP
Q1318 2SC2712-YG AMPLIFIER
Q1372 2SC2712-YG DELAY BUFFER
Q6204 * MUTE
Q6208 * AMP
Q6201 * AMP
Q6214 * AMP
Q6200 * MUTING
Q6205 *

D6212 * PROTECT
D6200 * PROTECTOR

PS6200 *
PS6201 *

JOINT B14
JOINT B15
JOINT B16
JOINT B17
JOINT B18
JOINT B19
JOINT B20
JOINT B21
JOINT B22
JOINT B23
JOINT B24
JOINT B25
JOINT B26
JOINT B27
JOINT B28
JOINT B29

CN6205 * TO A BOARD CN605
3D- VCC 1
3D GND 2
3D GND 3
3D+ VCC 4

CN6206 5P WHT :S-MICRO TO A BOARD CN201
9V 1
MUTE 2
PROT 3
GND 4
NC 5
GND 6
NC 7

CN1300 3P
VM 1
GND 2
9V 3

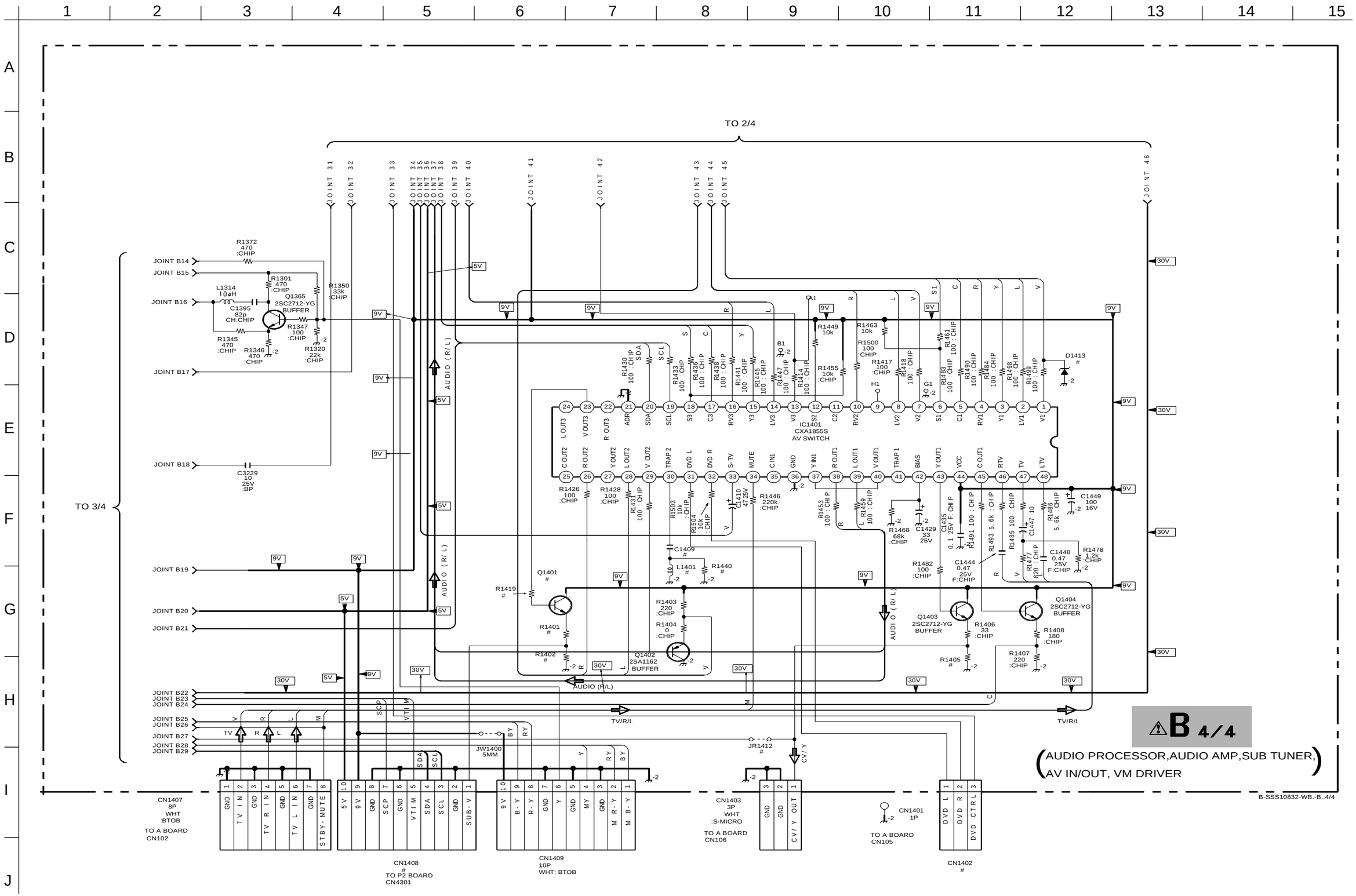
CN1404 # TO A BOARD CN302
7V 1
GND 2
3.0V 3
GND 4
AFT2 5
SCP 6
VTIM 7
GND 8

CN1405 10P WHT :BTOB TO A BOARD CN101
11V 1
SDA 2
SCL 3
GND 4
NC 5
C OUT 6
CV/Y OUT 7
GND 8
L OUT 9
R OUT 10

CN1406 10P TO A BOARD CN303
R-Y OUT 1
B-Y OUT 2
GND 3
Y OUT 4
YS OUT 5
GND 6
Y IN 7
GND 8
R-Y IN 9
B-Y IN 10

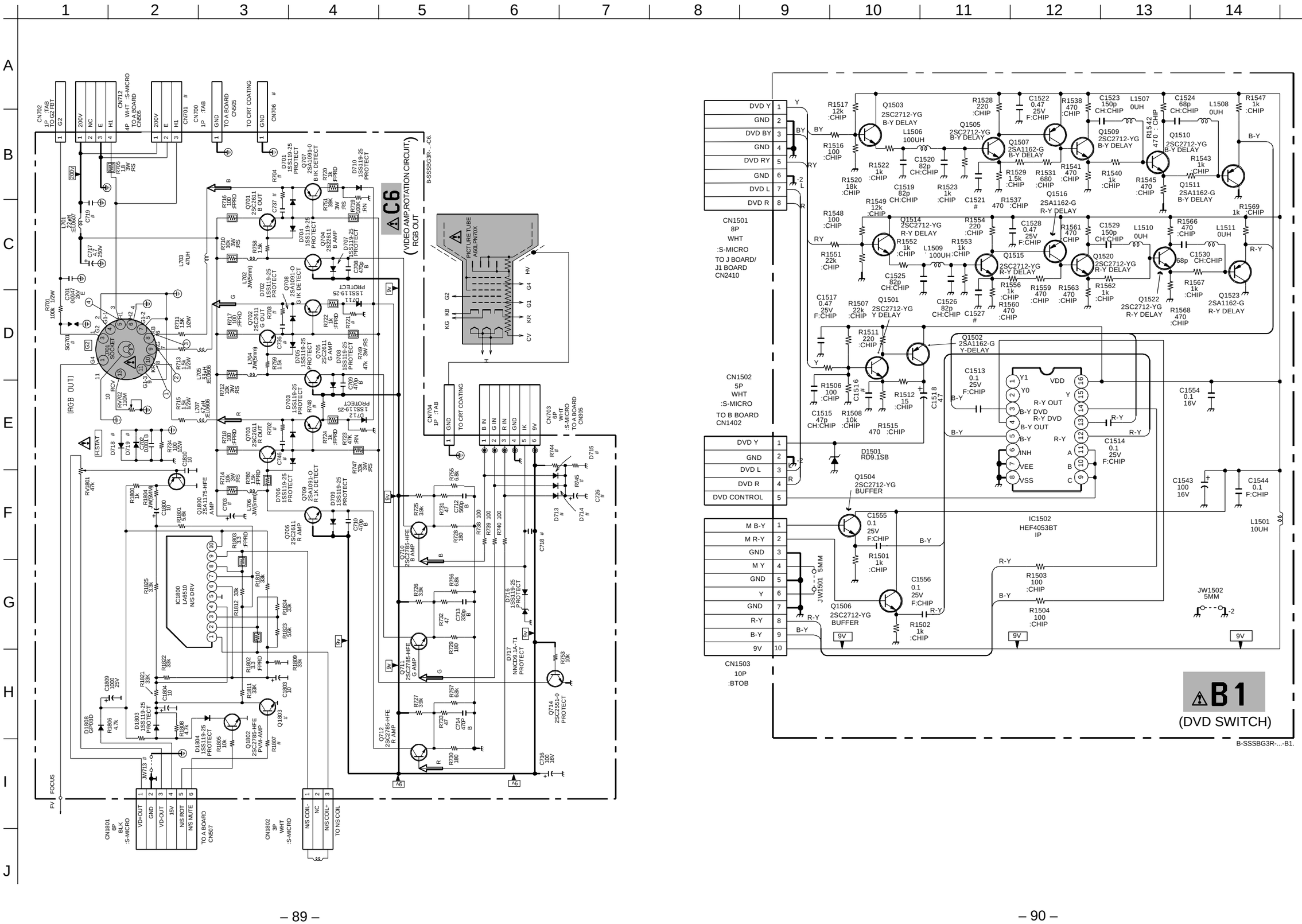
B-SSS10832-WB.-B..3/4

KV-XA25M60/XA25M63/XA25N90
RM-954 RM-914



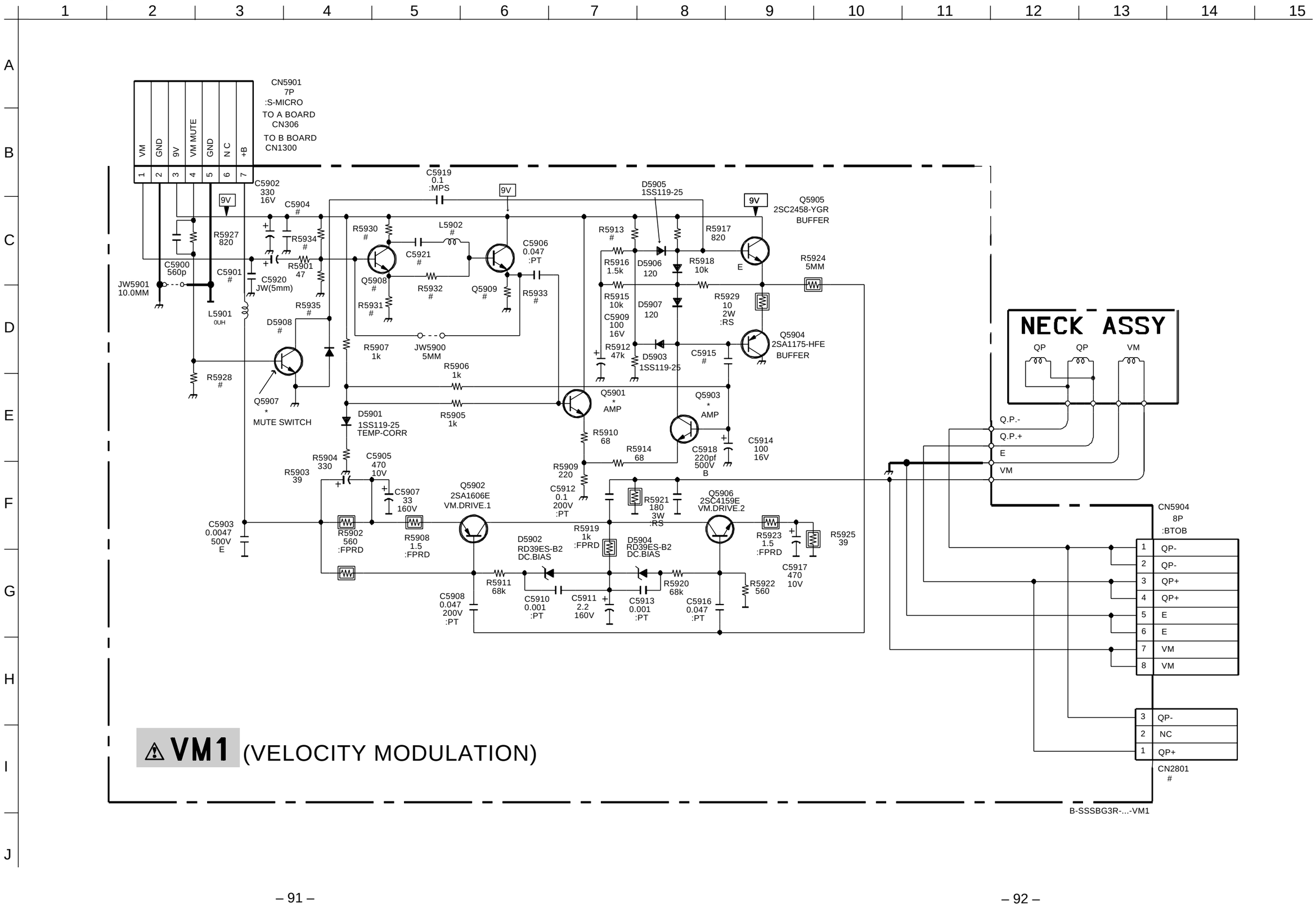
KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914

(4) Schematic Diagrams of C6 and B1 Boards



KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914

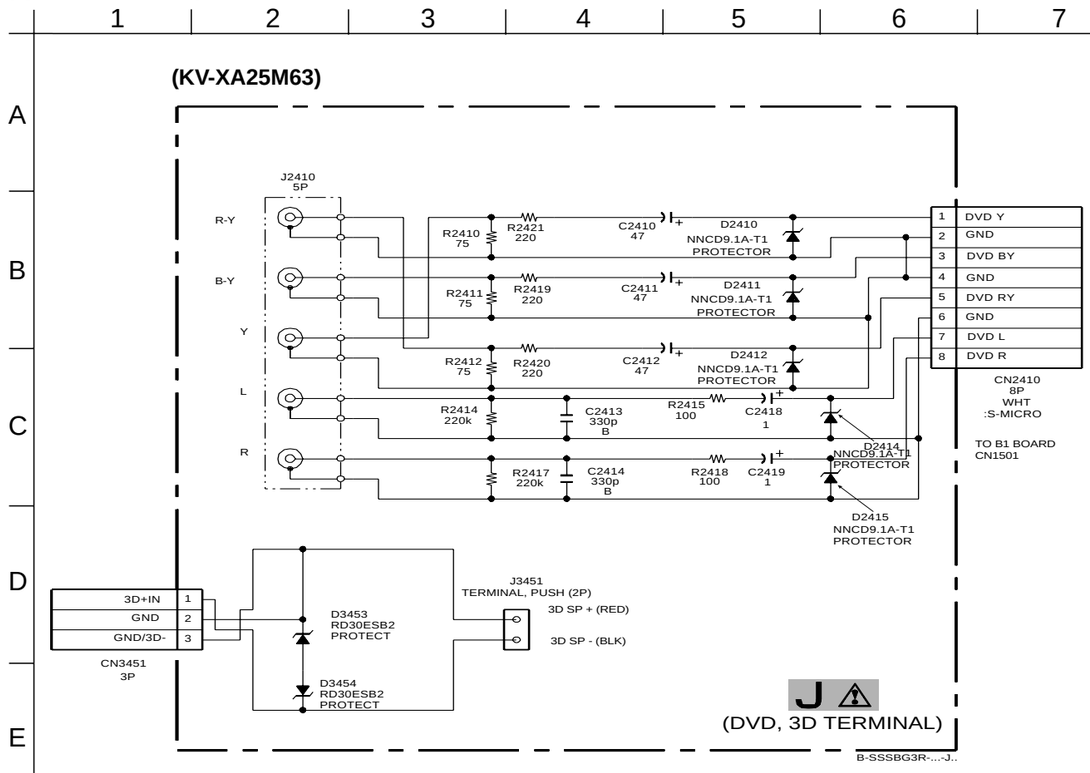
(5) Schematic Diagram of VM1 Board



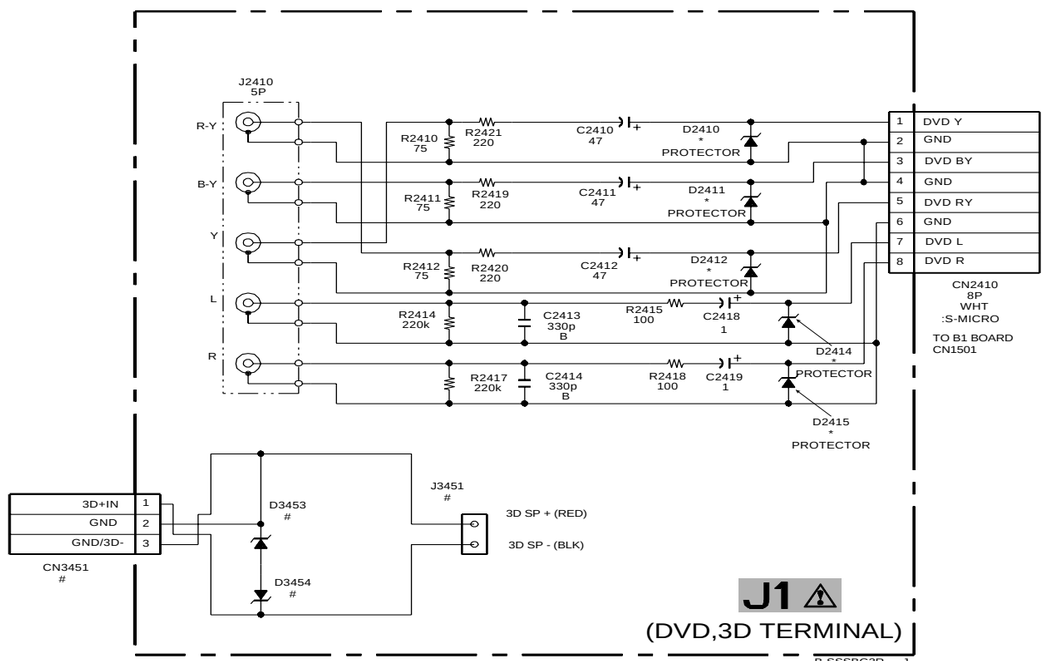
KV-XA25M60/XA25M63/XA25N90 RM-954 RM-914

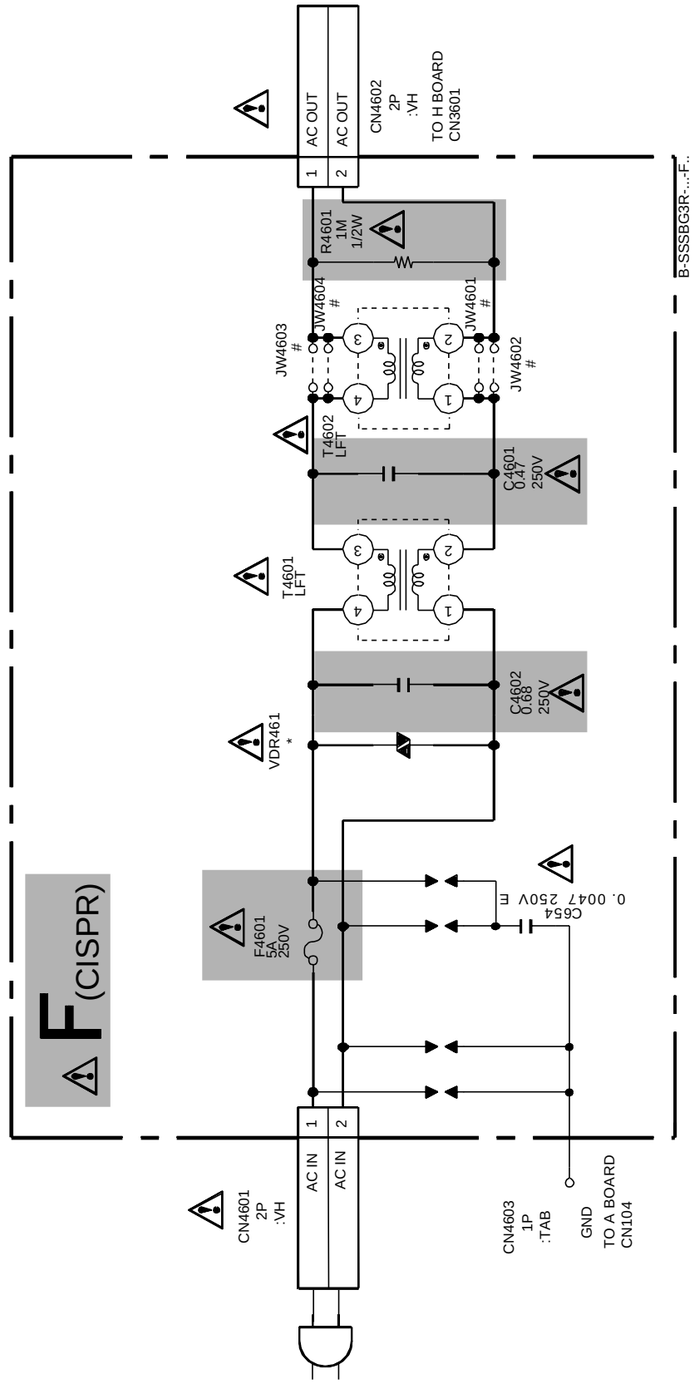
(6) Schematic Diagram of J, J1 and F Boards

(KV-XA25M63)



(KV-XA25M60/XA25N90)





A Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
C101	#	#	10
C106	#	#	0.047
C301	470 25V	470 25V	470 16V
C601	0. 033 630V :PP	0. 033 630V :PP	#
C613	560 450V	560 450V	820 250V
C616	0.022 400V	0.022 400V	#
C617	100P IKV :CHIP	100P IKV :CHIP	#
C627	#	680P 500V :CHIP	#
C628	#	1000 35V	#
C638	#	0.0047 500V ;CHIP	#
CN506	#	#	PIN, LEAD COATING
CN605	#	4P	#
D100	MA111-(K8).S0	MA111-(K8).S0	#
D319	#	#	UDZS-TE17-9.1B
D322	#	#	UDZS-TE17-9.1B
D518	RU4AM-T3	RU4AM-T3	RU4AM-T4
D609	RU-1P	RU-1P	#
D610	11EQS04	11EQS04	AK04V0
D629	#	D5LC20U	#
D630	D5LC20U	FMX-12S	D5LC20U
D638	11ES2-NTA2B	11ES2-NTA2B	D1N20R
FB607	#	FERRITE 1.1µH	#
FB613	FERRITE 1.1µH	FERRITE 1.1µH	#
FB615	0µH	1.1µH	0µH
IC001	CXP750097-032S	CXP750097-032S	CXP750097-033S
IC100	S-80743AL-A7-S	S-80743AL-A7-S	#
Q001	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q002	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q101	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q301	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q302	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q303	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q304	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q305	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q306	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q307	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q308	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q310	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q311	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q312	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q313	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q314	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q316	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q317	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q503	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q507	2SA1037AK-T146	2SA1037AK-T146	2SA1162-G
Q509	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q602	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q606	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
Q608	2SC1623-L5L6	2SC1623-L5L6	2SC2712-YG
R006	#	#	39K :CHIP
R007	#	#	220 :CHIP
R009	#	#	4.7K :CHIP
R028	10K	10K	1k
R030	#	#	100 :CHIP
R037	100	100	27K
R101	100 :CHIP	100 :CHIP	#
R102	100 :CHIP	100 :CHIP	#
R103	#	#	100 :CHIP
R104	#	#	100 :CHIP
R106	#	#	1.0K :CHIP
R114	#	#	4.7K :CHIP
R115	#	#	4.7K :CHIP
R620	#	#	0.027 400V

A Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
R635	82K 3W :RS	82K 3W :RS	#
R637	82K 3W :RS	82K 3W :RS	#
TU101	BTF-WG441	BTF-WG441	BTF-WG411
VDR600	ERZV14D621	ERZV14D621	#

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

B Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
C3202	0.33MF	#	0.33MF
C3238	0.47 25V	#	0.47 25V
C3239	0.33	#	0.33
C3243	0.033 25V	#	0.033 25V
C3244	1 16V :CHIP	#	1 16V :CHIP
C3245	0.47 25V	#	0.47 25V
C3246	47P :CHIP	#	47P :CHIP
C3247	4.7	#	4.7
C3248	100	#	100
C3249	2.2 16V :CHIP	0 :CHIP	2.2 16V :CHIP
C3250	1 16V :CHIP	#	1 16V :CHIP
C3251	10	#	10
C3252	100PF 16V	#	100PF 16V
C3253	100 16V	#	100 16V
C3255	47	#	47
C3256	4.7	#	4.7
C3257	1 16V	#	1 16V
C3258	0.033 25V	#	0.033 25V
C6201	#	10	#
C6207	#	0.1 25V :CHIP	#
C6208	#	0.1 25V :CHIP	#
C6215	#	100 16V	#
C6216	#	1.0	#
C6218	#	0.1 25V :CHIP	#
C6219	#	2.2	#
C6221	#	0.47	#
C6225	#	0.1 25V :CHIP	#
C6226	#	0.1 25V :CHIP	#
C6227	#	2200	#
C6228	#	0.1 25V :CHIP	#
C6229	#	2.2 16V :CHIP	#
C6230	#	0.1 25V :CHIP	#
C6231	#	2200	#
C6232	#	0.001 :CHIP	#
C6233	#	680P :CHIP	#
C6234	#	0.0047 :CHIP	#
C6235	#	100P :CHIP	#
C6236	#	0.1 25V :CHIP	#
C6237	#	1.0 :PP	#
C6238	#	0.001 :CHIP	#
C6239	#	2200 25V	#
C6240	#	0.1 :PT	#
C6251	#	22	#
C6252	#	22	#
C6253	#	0.47	#
CN6202	#	4P	#
CN6205	#	4P	#
D3201	1SS35STE-17	#	1SS35STE-17
D3203	1SS35STE-17	#	1SS35STE-17
D6200	#	RD5.1ES-B3	#
D6205	#	1SS355TE-17	#
D6211	ISS352	ISS352	MA111-(K8).S0
D6212	ISS352	ISS352	MA111-(K8).S0
FB6201	#	FERRITE 1.1µH	
FB6202	#	FERRITE 1.1µH	
IC3204	UPC455892	#	UPC455892
IC6201	#	TDA7481	#
L6202	#	65µH	#
PS6200	#	LINK IC 2.7A/150V	#
PS6201	#	LINK IC 2.7A/150V	#
Q3201	2SK246GR	#	2SK246GR
Q3202	2SC2712-YG	#	2SC2712-YG
Q3204	2SK246GR	#	2SK246GR
Q6200	#	2SA1162-G	#
Q6201	DTC144EKA	DTC144EKA	UN2213
Q6202	#	2SA1162-G	#
Q6203	DTC144EKA	DTC144EKA	UN2213

B Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
Q6204	DTC144EKA	DTC144EKA	UN2213
Q6205	#	2SA1162-G	#
Q6206	#	2SA1162-G	#
Q6207	#	2SK246-GR	#
Q6208	DTC144EKA	DTC144EKA	UN2213
Q6214	#	UN2213	#
R3200	1.0M	#	1.0M
R3201	1.0M	#	1.0M
R3202	100K	#	100K
R3203	1.0M	#	1.0M
R3204	3.3K	#	3.3K
R3205	6.8K	#	6.8K
R3206	390	#	390
R3207	10K	#	10K
R3220	100K	#	100K
R3221	10K	#	10K
R3222	10K	#	10K
R3223	680	#	680
R3233	6.8K	#	6.8K
R3234	390	#	390
R3235	150K	#	150K
R3236	470K	#	470K
R3237	680	#	680
R3245	100K	#	100K
R3246	680	#	680
R3251	150K	#	150K
R3252	470K	#	470K
R3253	680	#	680
R3254	10K	#	10K
R3255	1.0M	#	1.0M
R3256	1.0M	#	1.0M
R3257	100K	#	100K
R3258	1.0M	#	1.0M
R3259	3.3K	#	3.3K
R3275	#	0 :CHIP	#
R3276	#	0 :CHIP	#
R6200	#	47K :CHIP	#
R6205	#	10K :CHIP	#
R6207	#	1.0K :CHIP	#
R6235	#	150 :CHIP	#
R6236	#	12K :CHIP	#
R6237	#	47K :CHIP	#
R6239	#	1.5K :CHIP	#
R6240	#	10K	#
R6241	#	470 2W :RS	#
R6242	#	470 2W :RS	#
R6243	#	8.2K	#
R6244	#	10K :CHIP	#
R6248	#	470 :CHIP	#
R6249	#	2.2K :CHIP	#
R6250	#	0 :CHIP	#
R6251	#	1.0K :CHIP	#
R6252	#	100K :CHIP	#
R6253	#	470 :CHIP	#
R6254	68P :CHIP	22 :CHIP	68P :CHIP
R6256	#	4.7K :CHIP	#
R6257	#	3.3K :CHIP	#
R6258	68P :CHIP	22 :CHIP	68P :CHIP
R6260	#	10K :CHIP	#
R6262	#	2.7K :CHIP	#
R6263	#	2.7K :CHIP	#
R6266	#	47K :CHIP	#
R6268	#	4.7K :CHIP	#

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

F Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
VDR461	#	#	TNR14V271K660

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

H Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
C3907	#	0.68 :MPS	#
CN3903	#	4P	#
CN3906	#	3P	#
IC3901	UPD6124G-212	UPD6124G-212	SBX1981-51(21)
L3903	#	68UH	#

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

J1 Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
D2410	NNCD9.1A-T1	#	HZS9.1NB2
D2411	NNCD9.1A-T1	#	HZS9.1NB2
D2412	NNCD9.1A-T1	#	HZS9.1NB2
D2414	NNCD9.1A-T1	#	HZS9.1NB2
D2415	NNCD9.1A-T1	#	HZS9.1NB2

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

VM1 Board ✲ Mark List

	KV-XA25M60	KV-XA25M63	KV-XA25N90
Q5901	2SC2785-HFE	2SC2785-HFE	2SC2458-YGR
Q5903	2SC2785-HFE	2SC2785-HFE	2SC2458-YGR
Q5905	2SC2785-HFE	2SC2785-HFE	2SC2458-YGR
Q5907	2SC2785-HFE	2SC2785-HFE	2SC2458-YGR

Note: The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

6-4 VOLTAGE MEASUREMENTS

A (1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC001	1	0
	2	4.9
	3	0.1
	4	0.1
	5	4.9
	6	4.9
	7	3.9
	8	4.8
	9	0.5
	10	4.8
	11	4.9
	12	0
	13	2.11
	14	2.1
	15	4.9
	16	4.9
	17	0
	18	4.8(0)
	19	2.4
	20	0.2
	21	4.9
	22	0
	23	4.9
	24	0.1
	25	4.8
	26	4.9
	27	4.8
	28	4.9
	29	4.9
	30	0
	31	0
	32	0
	33	4.9
	34	0
	35	0
	36	2.5
	37	2.5
	38	4.8
	39	4.9
	40	0
	41	0.1
	42	0
	43	0
	44	4.9
	45	4.9
	46	4.6
	47	4.9
	48	4.6
	49	0
	50	2.1
	51	0.1
	52	4.7(0.1)

Ref	Pin No.	Voltage[v]
IC002	1	0
	2	4.9
	3	4.8
	4	7.3
	5	4.9
	6	0
	7	0
IC003	1	0
	2	0
	3	0
	4	0
	5	4.9
	6	0(4.9)
	7	4.9(0)
	8	4.9
IC100	1	4.8
	2	4.8
	3	0
IC301	1	3.3
	2	5.1
	3	1.4
	4	5.1
	5	4.8
	6	4.4
	7	1.6
	8	3.8
	9	5.1
	10	3.8
	11	5.1
	12	0
	13	3.9
	14	2.3
	15	3.5
	16	3.5
	17	5.4
	18	7.6
	19	0(0.8)
	20	3.6
	21	3.2
	22	3.8
	23	3.5(3.9)
	24	1.7
	25	1.8
	26	1.6
	27	0
	28	4.5
	29	4.5
	30	4.5
	31	8.8
	32	4.1
	33	4.1
	34	3.6
	35	8.8
	36	4.6
	37	4.6
	38	4.6
	39	4.7
	40	5.1

Ref	Pin No.	Voltage[v]
	41	5.1
	42	0
	43	5.1
	44	4.9(5.1)
	45	6.2
	46	5.1
	47	8.8
	48	2.1(0.2)
	49	5.2(4.2)
	50	0
	51	0
	52	1.7
IC302	1	1.6
	2	0
	3	1.6
	4	0
	5	1.4(1.7)
	6	0(4.9)
	7	4.7(0)
	8	0.6
	9	0
	10	1.1
	11	4.9
	12	4.8
	13	0
	14	1.4
	15	0
	16	0.9
IC502	1	1.3
	2	3.5
	3	1.9
	4	0
	5	2.9
	6	2.6
	7	0(6.4)
	8	8.9
IC503	1	1.6
	2	13.8
	3	-13.8
	4	-14.8
	5	0.5(0.3)
	6	13.1
	7	1.6
IC602	1	119.5
	2	135.3
	3	0
IC603	I	12.6
	G	0
	O	8.9
IC604	I	7.8
	G	0
	O	4.9
Q001	B	4.9
	C	0
	E	0.9
Q002	B	0
	C	4.9
	E	09

A (2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q005	B	4.8	Q311	B	0	Q511	B	-0.1
	C	0		C	8.9		C	123.9(100.00)
	E	4.8		E	0		E	0
Q101	B	2.8	Q312	B	4.8(5.1)	Q600	B	0
	C	8.9		C	0		C	12.6
	E	2.1		E	6.2(6.6)		E	0
Q301	B	12.6	Q313	B	0	Q601	B	-0.6
	C	0		C	12.5		C	-0.4
	E	12.5		E	0		E	-0.6
Q302	B	1.6	Q314	B	0.5	Q602	B	0
	C	8.1		C	0		C	16.7
	E	0.9		E	1.1		E	0
Q303	B	8.1	Q315	B	0	Q603	B	16.7
	C	1.7		C	2.9		C	3.9
	E	8.7		E	0		E	16.7
Q304	B	3.6	Q316	B	4.1	Q604	B	134.1
	C	0		C	0		C	0
	E	4.3		E	4.7		E	134.2
Q305	B	8.1	Q317	B	4.1	Q605	D	310.6
	C	2.1		C	0		G	32.1
	E	8.7		E	4.8		S	-0.6
Q306	B	1.6	Q503	B	0	Q606	B	-0.1
	C	8.1		C	3.6		C	0.2
	E	1.0		E	0		E	-0.6
Q307	B	4.3	Q505	D	21.8	Q607	B	0.7
	C	8.7		G	6.4		C	0
	E	3.7		S	0		E	0
Q308	B	3.6	Q506	B	-0.6	Q608	B	0
	C	0.5		C	86.9		C	0.7
	E	0.8		E	0		E	0
Q309	B	4.7(0)	Q507	B	12.6	PH600	1	0.2
	C	0(4.7)		C	0.1		2	4.9
	E	0		E	13.0		3	0
Q310	B	2.1(0.2)	Q509	B	0.6		4	16.7
	C	4.8		C	0.1			
	E	1.3(0)		E	0			

VM1 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q5901	B	2.7	Q5904	B	4.6	Q5907	B	0
	C	8.9		C	0		C	0.2
	E	2.0		E	5.1		E	0
Q5902	B	135.2	Q5905	B	5.6	Q5908	B	3.4
	C	81.2		C	8.9		C	0
	E	135.2		E	5.1		E	0
Q5903	B	2.7	Q5906	B	0.4	Q5909	B	0
	C	4.6		C	81.3		C	8.9
	E	2.0		E	0.1		E	3.4

B (1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC1401	1	3.8
	2	3.9
	3	3.8
	4	3.9
	5	3.8
	6	8.2
	7	3.8
	8	3.9
	9	3.8
	10	3.9
	11	3.8
	12	8.2
	13	3.8
	14	3.9
	15	3.8
	16	3.9
	17	3.8
	18	8.2
	19	4.6
	20	4.6
	21	0
	22	3.9
	23	3.8
	24	3.9
	25	3.8
	26	3.9
	27	3.8
	28	3.9
	29	3.8
	30	3.8
	31	3.9
	32	3.8
	33	3.8
	34	0
	35	3.8
	36	0
	37	3.8
	38	3.9
	39	3.9
	40	3.8
	41	3.8
	42	3.9
	43	3.7
	44	8.9
	45	3.8
	46	3.9
	47	3.8
	48	3.9
IC1402	1	4.8
	2	2.42
	3	2.4
	4	0
	5	2.4
	6	2.4
	7	4.8
	8	8.9
IC1404	I	12.5
	G	0
	O	8.9
IC3200	1	4.4
	2	4.4
	3	4.4
	4	0
	5	4.4
	6	4.4
	7	4.4
	8	8.9
IC3201	1	0.1
	2	0.1
	3	8.9
	4	4.5
	5	4.4
	6	4.4
	7	4.4
	8	0
	9	4.4
	10	4.4
	11	4.4
	12	4.4
	13	4.4
	14	4.4
	15	4.4
	16	4.1
IC3202	1	4.4
	2	4.4
	3	4.4
	4	0
	5	4.4
	6	4.4
	7	4.4
	8	8.8
IC3203	1	4.4
	2	4.4
	3	4.4
	4	4.4
	5	8.7
	6	0.2
	7	0
	8	0.2
	9	0.2
	10	0.2
	11	0.1
	12	0.1
	13	8.7
	14	8.9
IC3204	1	4.4
	2	4.4
	3	4.4
	4	0
	5	4.4
	6	4.4
	7	4.4
	8	8.9
IC3205	1	0.1
	2	0.1
	3	8.7
	4	0.3
	5	0.3
	6	0.3
	7	0.3
	8	0
	9	0.1
	10	2.2
	11	0
	12	0
	13	8.9
	14	4.6
	15	4.6
	16	8.9
IC3206	1	0
	2	0
	3	0(0.2)
	4	4.4
	5	4.4
	6	4.4
	7	4.4
	8	4.4
	9	4.4
	10	4.4
	11	4.4
	12	4.4
	13	0
	14	2.5
	15	8.9
	16	0.1
	17	4.5
	18	4.6
	19	2.5
	20	0
	21	4.4
	22	4.4
	23	4.4
	24	4.4
	25	4.4
	26	4.4
	27	4.4
	28	4.4
	29	4.4
	30	4.4
	31	3.9(3.3)
	32	4.4
IC6200	1	1.6
	2	0
	3	0
	4	0
	5	1.6
	6	8.7
	7	12.1
	8	0.8
	9	25.7
	10	0

B (2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
Q1316	B	(8.3)	Q1402	B	(3.8)	Q3203	B	3.9
	C	4.1		C	0		C	8.7
	E	8.9		E	4.9		E	3.3
Q1317	B	4.1	Q1403	B	3.7	Q3204	D	4.3
	C	8.9		C	8.9		G	3.9
	E	3.4		E	3.0		S	4.3
Q1318	B	4.3	Q1404	B	3.8	Q6201	B	4.1
	C	6.2		C	8.9		C	0
	E	3.6		E	3.1		E	0
Q1323	B	2.6	Q1408	B	5.8	Q6203	B	4.1
	C	8.3		C	8.9		C	0
	E	1.9		E	5.2		E	0
Q1324	B	6.2	Q1409	B	2.4	Q6204	B	4.1
	C	8.9		C	5.8		C	0
	E	5.5		E	1.7		E	0
Q1365	D	0	Q3201	D	4.2	Q6208	B	0
	F	0		G	4.0		C	8.7
	C	4.3		S	4.3		E	0
Q1372	B	3.6	Q3202	B	0(3.9)			
	C	6.2		C	8.7			
	E	2.9		E	3.3			

C6 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]	Ref	Pin No	Voltage[v]
IC1800	1	6.4	Q703	B	150.9<145.7>	Q710	B	1.6(8.4)<1.7>
	2	6.4		C	203.6		C	8.4(8.9)
	3	6.4		E	151.8<146.7>		E	1.2
	4	6.4	Q704	B	8.9	Q711	B	1.8
	5	0		C	155.1(153.6)<149.2>		C	8.4
	6	6.4		E	8.4		E	1.4
	7	6.4	Q705	B	8.9	Q712	B	1.7
	8	6.3		C	148.9<143.5>		C	8.4
	9	6.3		E	8.4		E	1.3
	10	12.7	Q706	B	8.2	Q714	B	0.7
J701	KR	152.2(148.7)<145.2>		C	151(149.2)<145.6>		C	0.2
	KG	148.7(145.9)<142.3>		E	7.7(8.3)		E	4.8
	KB	155.9(152.8)<148.6>	Q707	B	155.8<150.4>	Q714	B	0.7
	H2	0(-0.7)		C	4.4(5.2)		C	0.2
	G2	312.7<310.2>		E	153.4<148.1>		E	0
Q701	B	154.4<149.2>	Q708	B	148.6<143.6>	Q1800	B	3.8
	C	204.2		C	5.6<6.0>		C	0
	E	156.6<150.6>		E	147<141.7>		E	4.5
Q702	B	148.8<143.5>	Q709	B	151.6<146.6>	Q1802	B	0.4
	C	204.4		C	4.9		C	3.4
	E	149.3<143.7>		E	149.2<144.3>		E	0
						Q1803	B	0
							C	6.4
							E	0

B1 BOARD VOLTAGE LIST

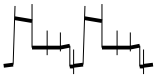
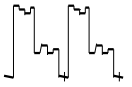
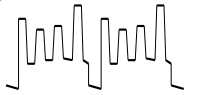
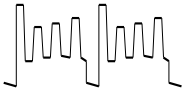
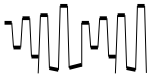
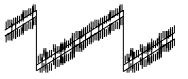
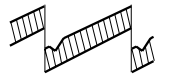
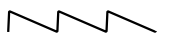
Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC1502	1	3.1	Q1502	B	2.3	Q1511	B	0.7
	2	3.0		C	2.3		C	0.7
	3	3.2		E	2.5		E	0
	4	4.6	Q1503	B	0.6	Q1514	B	0.6
	5	4.6		C	0.6		C	0.6
	6	0		E	0.6		E	0.6
	7	0	Q1505	B	0.6	Q1515	B	0.6
	8	0		C	0.8		C	0.6
	9	8.1		E	0		E	0.6
	10	7.9	Q1507	B	0.7	Q1516	B	0.5
	11	7.9		C	0.8		C	0.5
	12	7.6		E	0.7		E	0.5
	13	7.6	Q1509	B	0.8	Q1520	B	0.5
	14	7.3		C	0.8		C	0.4
	15	7.6		E	0		E	0
	16	7.6	Q1510	B	0.7	Q1522	B	0.4
Q1501	B	2.5		C	0.7		C	0
	C	2.4		E	0		E	0.5
	E	2.4				Q1523	B	0.4
							C	0
							E	0.5

H BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC3901	1	4.9
	2	4.9
	3	0
Q3901	B	0.1
	C	4.9
	E	0.1
Q3902	B	4.7
	C	2.2
	E	1.8

6-5. WAVEFORM

A BOARD WAVEFORMS

① 4.9Vp-p (V)	② 1.8Vp-p (V)	③ 1.8Vp-p (V)	④ 1.0Vp-p (H)	⑤  0.7Vp-p (V)
⑥ 0.8Vp-p (H)	⑦ 0.9Vp-p (H)	⑧ PAL/SECAM PAL : 0.6Vp-p (H) SECAM : 0.8Vp-p (H)	⑧ NTSC 0.7Vp-p (H)	⑨ 0.7Vp-p (H)
⑩ PAL/SECAM : 3.6Vp-p (H) NTSC : 3.9Vp-p (H)	⑪ PAL  3.5Vp-p (H)	⑪ SECAM 3.5Vp-p (H)	⑪ NTSC 3.5Vp-p (H)	⑫ PAL  3.6Vp-p (H)
⑫ SECAM  4.1Vp-p (H)	⑫ NTSC  3.7Vp-p (H)	⑬ PAL  1.3Vp-p (H)	⑬ SECAM 1.3Vp-p (H)	⑬ NTSC  1.3Vp-p (H)
⑭ 134Vp-p	⑮ 924Vp-p (H)	⑯  2.0Vp-p (V)		

C6 BOARD WAVEFORMS

① PAL 122Vp-p (H)	① SECAM 125Vp-p (H)	① NTSC 140Vp-p (H)
② PAL/SECAM PAL : 122Vp-p (H) SECAM : 118Vp-p (H)	② NTSC 113Vp-p (H)	③ PAL/NTSC PAL : 135Vp-p (H) NTSC : 126Vp-p (H)
③ SECAM 115Vp-p (H)	④ PAL/NTSC : 23.1Vp-p (H) SECAM : 22.8Vp-p (H)	

MEMO

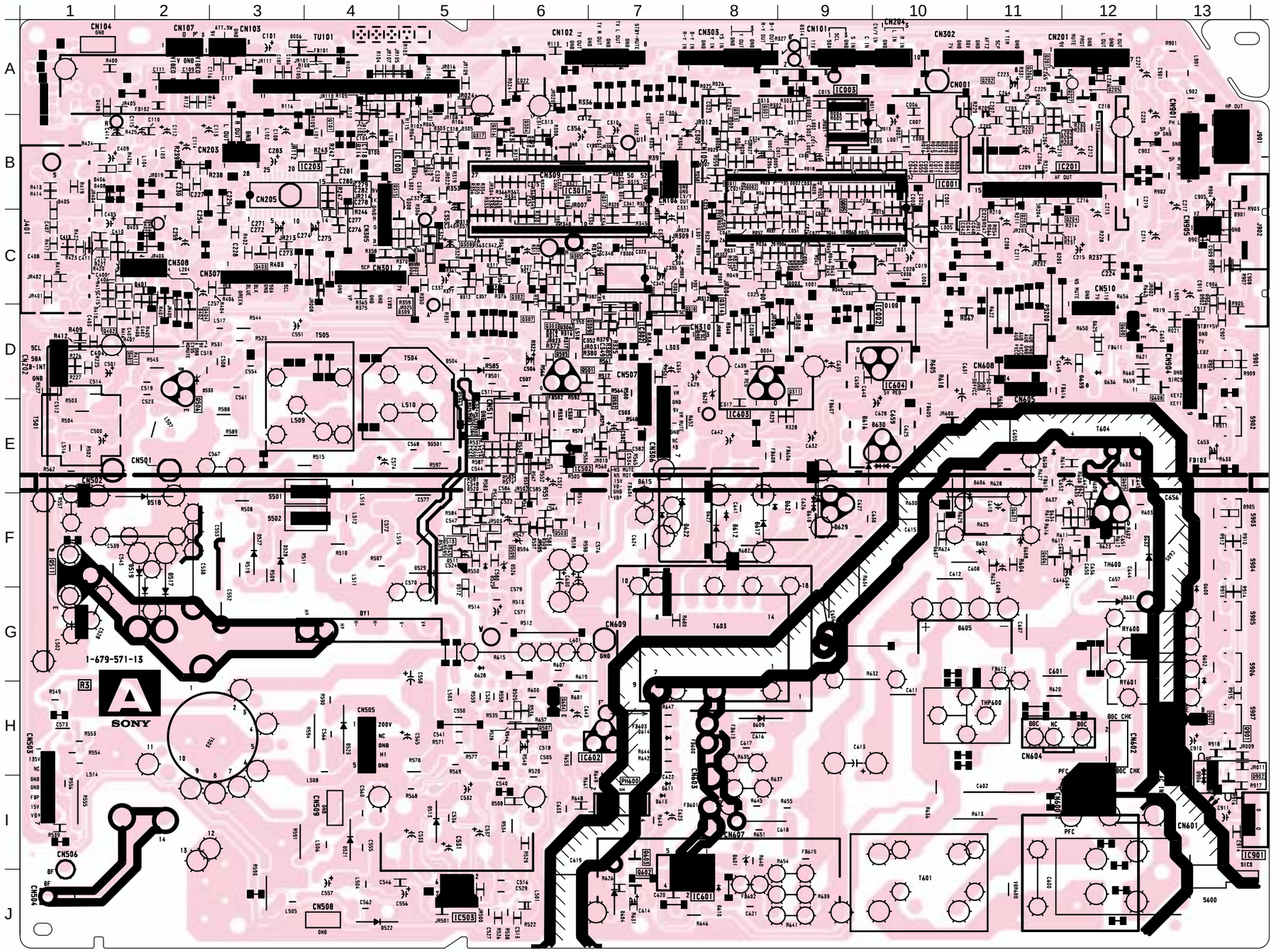
KV-XA25M60/XA25M63/XA25N90
RM-954 RM-914

6-6 PRINTED WIRING BOARD

A [SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION, TUVIF, FRONT AMP, POWER SUPPLY]

NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or re-pairing it to prevent an electric shock.

– A Board –



A BOARD

IC

IC001	B-10
IC002	D-10
IC003	A-9
IC100	B-4
IC201	B-12
IC203	B-4
IC301	B-6
IC302	D-7
IC502	E-6
IC503	J-5
IC601	J-8
IC602	H-6
IC603	E-8
IC604	D-10
IC901	I-13
PH600	1-7

TRANSISTOR

Q001	B-8
Q002	B-8
Q005	B-9
Q101	B-4
Q201	A-11
Q202	A-11
Q203	C-11
Q204	C-12
Q205	A-12
Q206	A-11
Q207	A-12
Q301	A-8
Q302	C-6
Q303	D-6
Q304	B-6
Q305	C-6
Q306	D-6
Q307	D-6
Q308	C-5
Q309	D-6
Q310	D-8
Q311	D-9
Q312	B-7
Q313	B-8
Q314	D-8
Q315	B-4
Q316	B-5
Q317	B-5
Q401	D-2
Q402	D-1
Q403	C-3
Q404	D-2
Q501	D-6
Q502	E-7
Q503	F-6
Q505	D-6
Q506	E-2
Q507	H-6
Q509	F-6
Q511	F-1
Q600	D-12
Q601	F-11
Q602	I-7
Q603	I-7
Q604	H-6
Q605	E-12
Q606	F-11
Q607	H-13
Q608	D-12
Q901	H-13
Q902	H-13

DIODE

D001	B-8
D002	B-9
D003	C-9
D004	D-8
D005	B-8
D006	A-3
D007	B-8
D008	B-8
D009	B-8
D010	D-10
D011	C-8
D100	B-4
D203	C-11
D300	A-9
D301	B-9
D303	B-5
D304	B-5
D305	B-5
D306	C-5
D307	C-5
D308	B-5
D309	D-5
D311	C-5
D312	C-5
D313	A-8
D314	A-9
D315	B-7
D316	B-7
D317	B-9
D319	B-6
D320	C-5
D321	B-6
D322	B-6
D401	C-2
D402	D-2
D403	C-2
D404	C-2
D405	B-1
D406	B-1
D407	C-2
D408	B-1
D409	A-1
D504	D-5
D505	H-6
D506	F-6
D507	F-6
D508	I-5
D509	F-6
D510	F-5
D511	F-5
D512	G-5
D513	I-5
D517	F-2
D518	F-2
D519	F-2
D520	E-5
D521	I-4
D522	J-4
D523	H-4
D525	F-5
D526	F-6
D527	F-3
D528	F-3
D529	F-5
D531	E-6
D533	D-2
D534	E-6
D600	G-13
D601	I-8
D602	G-13
D603	F-11
D604	J-7
D605	G-10
D606	E-11
D607	F-10
D608	F-11
D609	H-8
D610	J-8
D611	I-7
D612	F-8
D613	I-7
D615	E-7
D616	E-9
D617	F-8
D618	F-9
D620	D-8
D621	F-9
D622	F-8
D623	F-12
D624	E-12
D625	D-12
D627	F-8
D628	G-5
D629	F-9
D630	E-10
D631	G-12
D632	F-12
D633	E-12
D634	F-11
D635	E-12
D636	D-12
D637	F-11
D638	E-11
D901	C-13
D902	C-13
D903	C-13
D904	C-13
D905	F-13
D906	H-13

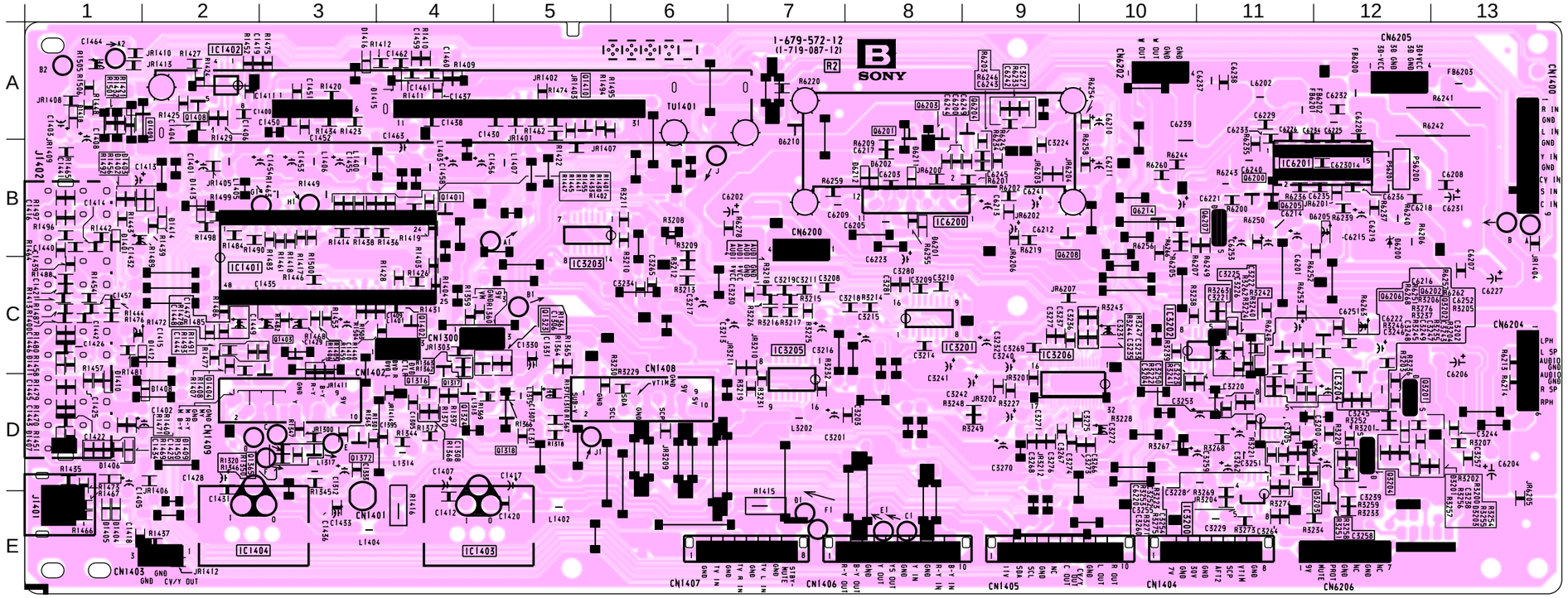
KV-XA25M60/XA25M63/XA25N90
RM-954 RM-914

PRINTED WIRING BOARD

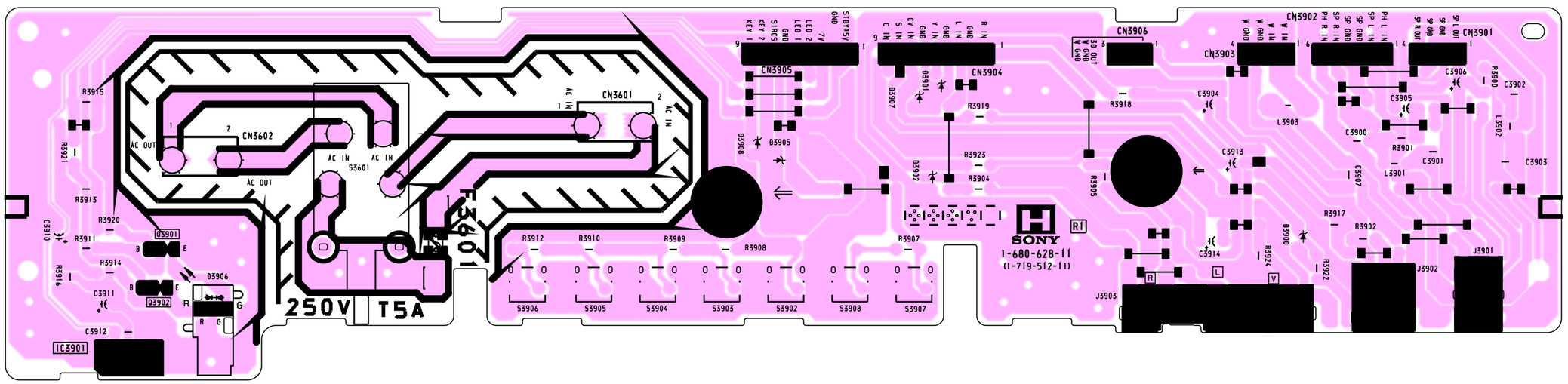
B [AUDIO PROCESSOR, AUDIO AMP, SUB TUNER, AV IN/OUT, VM DRIVER]

H [FRONT AV IN, SENSOR, POWER SWITCH]

– B Board –



– H Board –



B BOARD

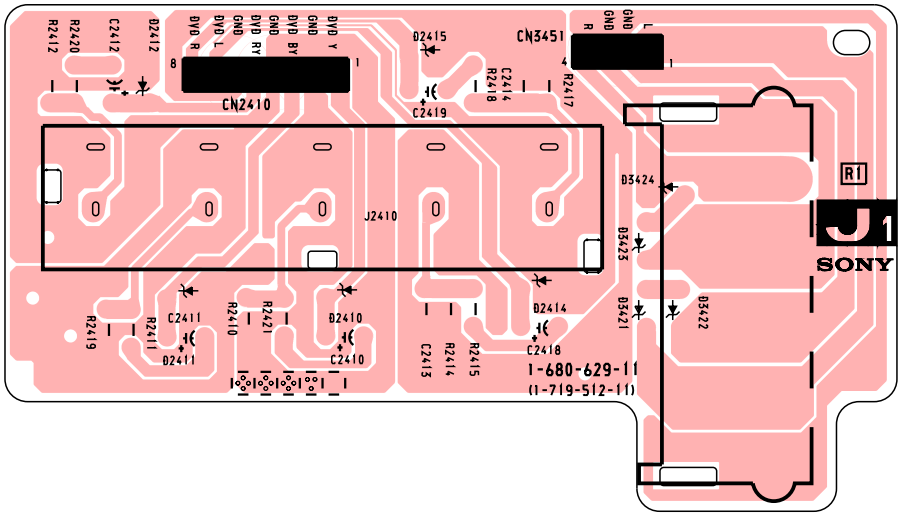
IC		Q6202	C-12
IC1401	C-2	Q6203	A-8
IC1402	A-2	Q6204	A-9
IC1403	E-4	Q6205	B-11
IC1404	E-2	Q6206	C-12
IC3200	E-10	Q6207	B-11
IC3201	C-9	Q6208	B-9
IC3202	C-10	Q6214	B-10
IC3203	C-5	**DIODE**	
IC3204	D-12		
IC3205	C-7	D1401	B-1
IC3206	C-9	D1402	B-1
IC6200	B-8	D1403	B-1
IC6201	B-11	D1404	E-1
TRANSISTOR		D1405	E-1
		D1406	D-1
Q1316	D-4	D1407	D-1
Q1317	D-4	D1408	D-2
Q1318	D-5	D1409	D-2
Q1323	C-5	D1410	D-1
Q1324	D-4	D1411	C-1
Q1365	D-2	D1412	C-2
Q1372	D-3	D1413	B-2
Q1401	B4	D1414	B-2
Q1402	C-4	D1415	A-3
Q1403	C-3	D1416	A-3
Q1404	D-2	D1418	A-1
Q1408	A-2	D3201	D-13
Q1409	A-2	D3203	E-13
Q1410	A-5	D3204	D-12
Q3201	D-12	D6200	B-12
Q3202	C-13	D6201	B-8
Q3203	E-12	D6202	B-8
Q3204	D-12	D6205	B-12
Q6200	B-11	D6210	B-7
Q6201	A-8	D6211	B-8
		D6212	B-8

PRINTED WIRING BOARD

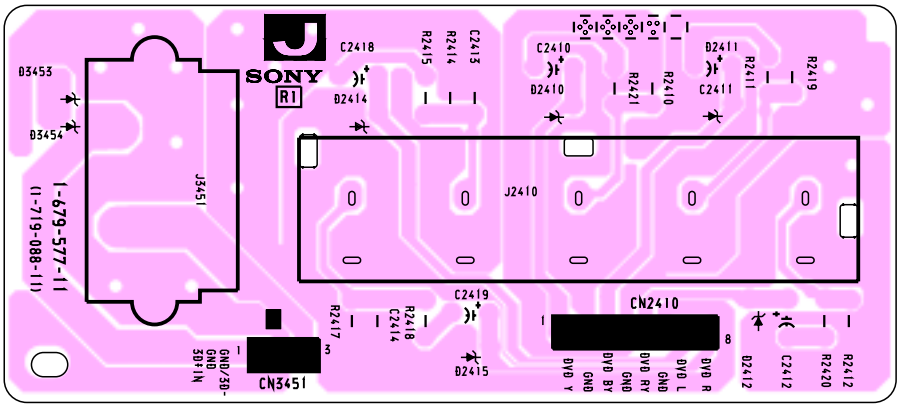
J1 [DVD, 3D TERMINAL]

J [DVD, 3D TERMINAL]

– J1 Board – (KV-XA25M60/XA25N90)



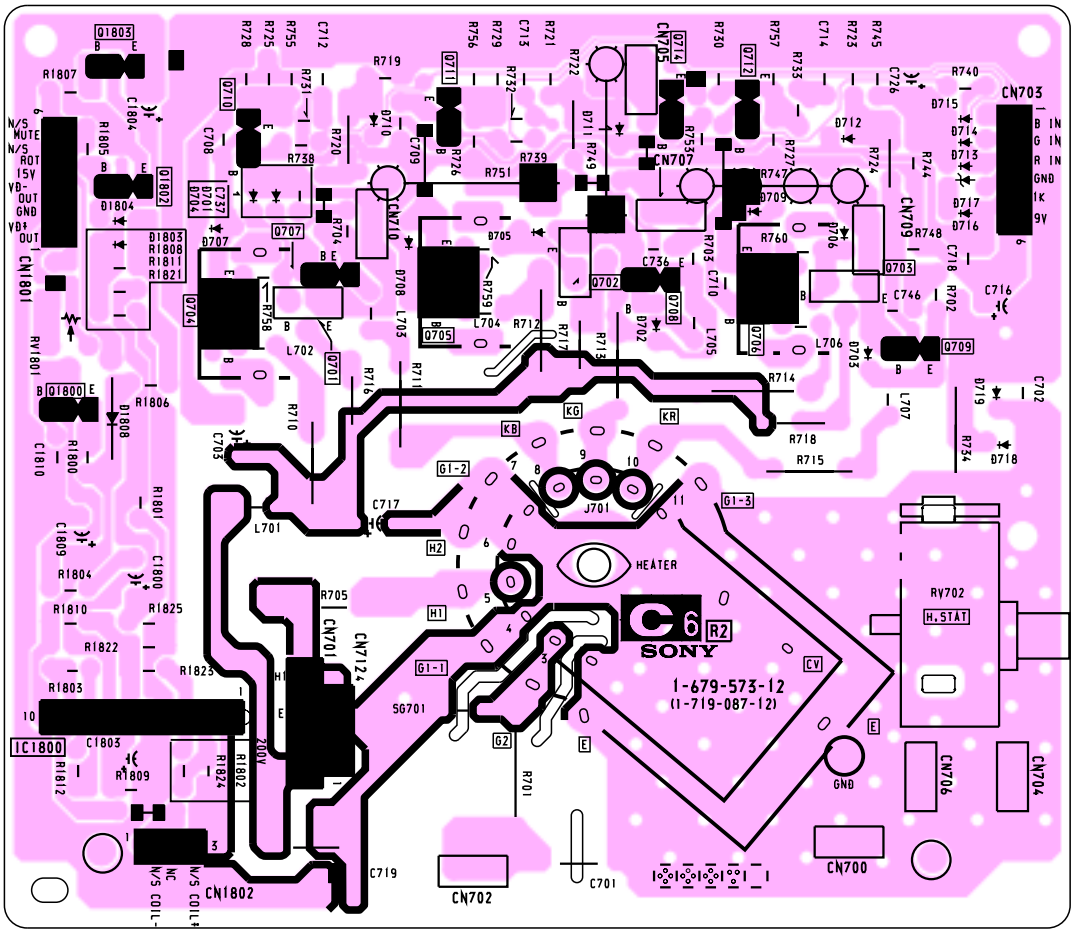
– J Board – (KV-XA25M63 ONLY)



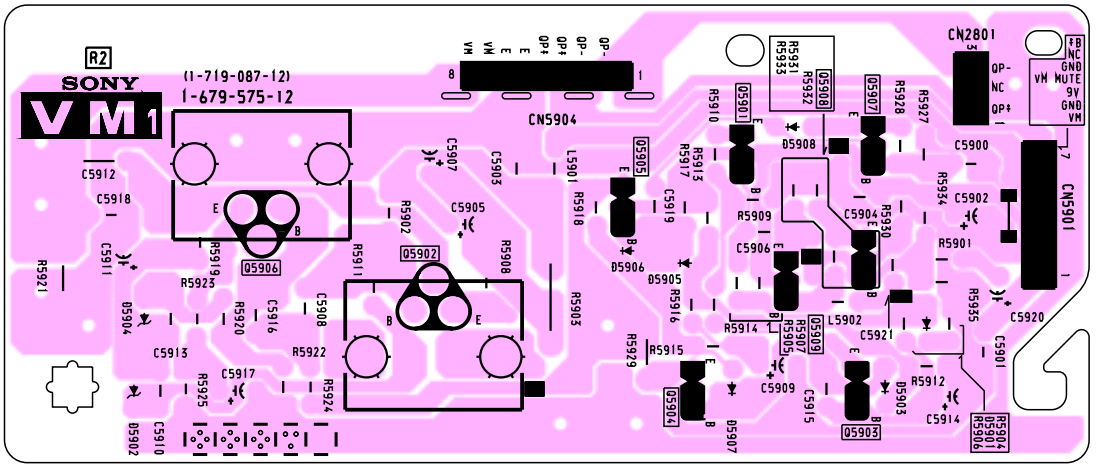
C6 [VIDEO AMP, ROTATION CIRCUIT]

VM1 [VELOCITY MODULATION]

– C6 Board –

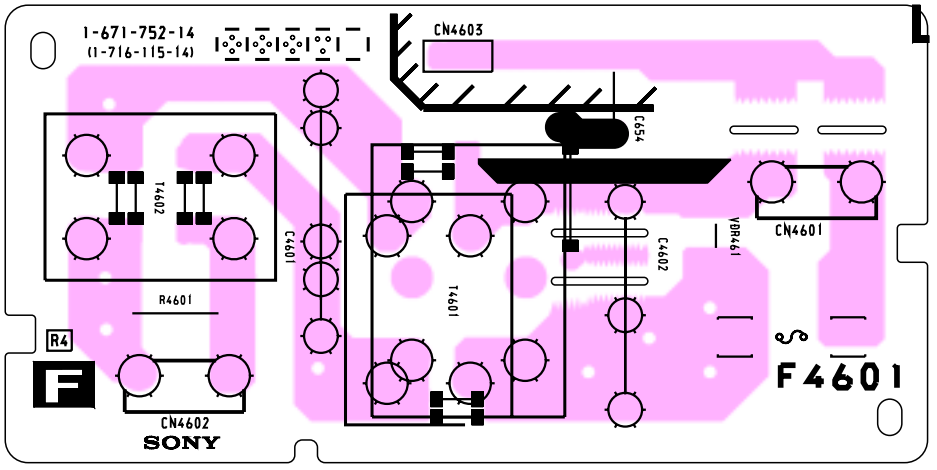


– VM1 Board –

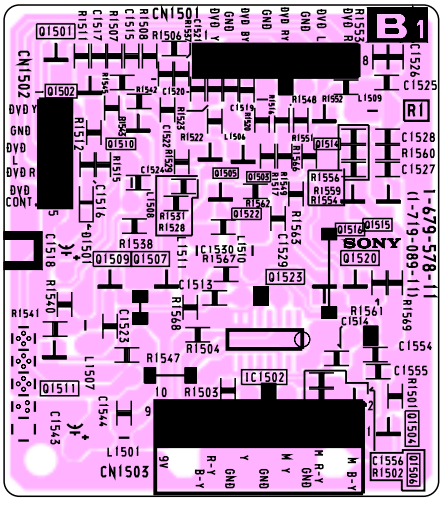


F [CISPR] **B1** [DVD SWITCH]

– F Board –

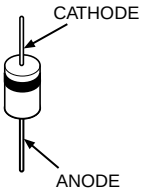
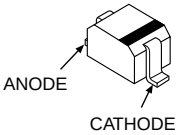
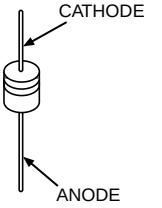
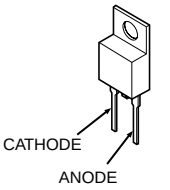


– B1 Board –

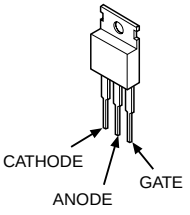
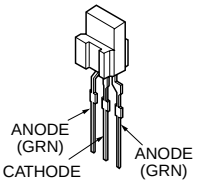
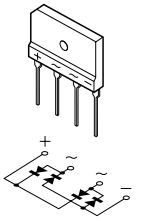
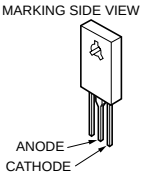
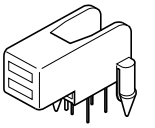
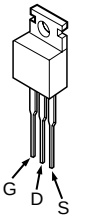


6-7. SEMICONDUCTORS

DIODE

					
AK04V0 AU-01Z-V1 D2L20U EL1Z ERA22-08 ERC06-15S ERC04-06SE GP08D	NNCD9.1A-T1 RD33EB3T RGP02-17EL-6433 RU4AM-T4 RS3FS RU4AM-T3 10ELS2N-TB5	DTZ-TT11-15B DTZ10B MA111-(K8).S0 RD5.1SB-T2 RD9.1S-B 1SS355TE17 UDZS-TE17-9.1B ISS352	D1N20R D1NS4 RD6.8ES-B1 RD20ES-B2 RD30ES-B2 RD39-ES-B2 1SS119-25 HZS9.1NB2	11EQS04 11ESZ-NTA2B RD5.1ES-B3	D5S6M

TRANSISTOR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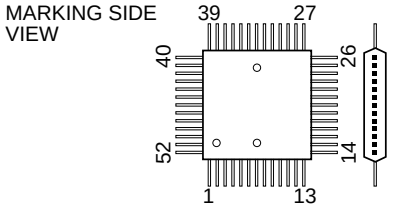		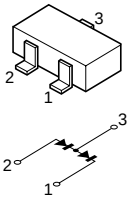	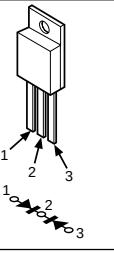	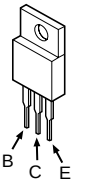	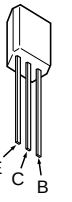
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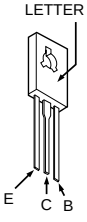	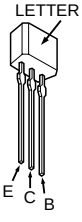	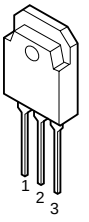	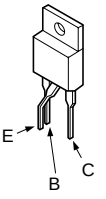	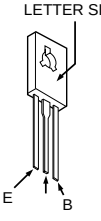	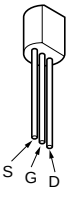
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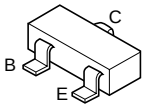
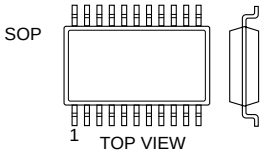
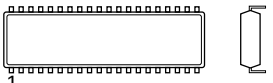
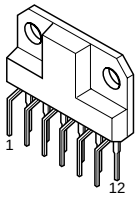
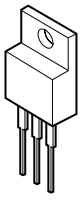
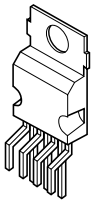
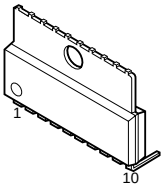
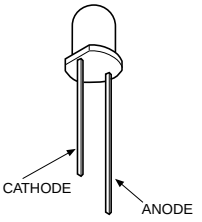
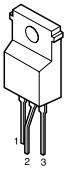
IC

		 Single In -line Package Pin 8～98		DIP  Dual In-line Package Pin 6～98	
UN2213 UN2111 2SC2712-YG DTA114TK	2SC1623-L5L6 2SA1162-G 2SD2114K DTC114EKA-T146	BH3868AFS-E2 (32 PIN) CXA1315M (16 PIN) HEF4053BT (16 PIN) MM1319AFBE (14 PIN) NJUM4066BM	NJM2903M NJM2188M-TE2 UPC4588G2 (8 PIN) UPD6124G-212	CXA1855S (48 PIN) CXA2159S CXP750097-033S M24C08-BN6(A) (8 PIN) TDA9181T CXP750097-032S	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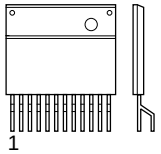
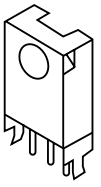
MARKING SIDE VIEW  Zig-zag In -line Package Pin 6～99			
STR-F6656		SBX1981-51(21)	

SECTION 7
EXPLODED VIEWS

NOTE:

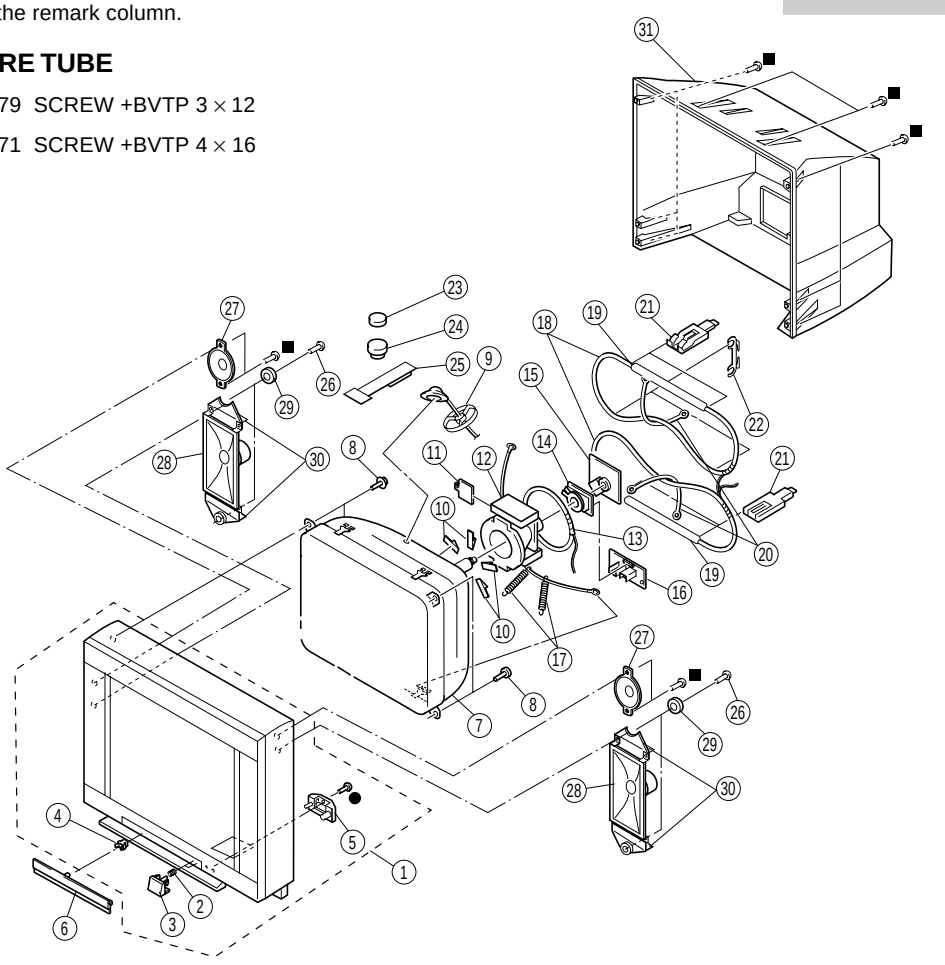
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. PICTURE TUBE

● : 7-685-648-79 SCREW +BVTP 3 × 12

■ : 7-685-663-71 SCREW +BVTP 4 × 16



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		X-4038-537-1	BEZNET ASSY (KV-XA25M60/M63)	2 ~ 5
		X-4038-748-1	BEZNET ASSY (KV-XA25N90)	2 ~ 5
2		4-036-405-11	SPRING, COMPRESSION	
3		4-075-747-01	BUTTON, POWER	
4		4-047-464-01	CATCHER, PUSH	
5	*	4-075-749-01	GUIDE, LIGHT	
6		4-078-944-51	CONTROL, DOOR (KV-XA25M60)	
		4-080-703-31	CONTROL, DOOR (KV-XA25M63)	
		4-078-944-71	CONTROL, DOOR (KV-XA25N90)	
7	⚠	8-733-250-05	PICTURE TUBE (A60LPN70X)	
8		4-046-765-12	SCREW, TAPPING 7 + CROWN WASHER	
9	*	3-704-372-11	HOLDER, HV CABLE	
10		4-064-818-01	SPACER, DY (KV-XA25M60/M63)	
		4-046-600-11	SPACER, DY (KV-XA25N90)	
11		4-057-714-01	PIECE, TLH CONVERGENCE (KV-XA25M60/M63)	
		4-077-228-02	PIECE, TLH CONVERGENCE (KV-XA25N90)	
12	⚠	1-451-475-11	DEFLECTION YOKE (Y25RSA)	
13		1-452-896-61	COIL, NA ROTATION (RT200) (KV-XA25N90)	
		1-452-896-81	COIL, NA ROTATION (KV-XA25M60/XA25M63)	
14		8-453-011-21	NA299-S	
15	*	A-1332-147-A	C6 BOARD MOUNTED (KV-XA25N90)	
	*	A-1332-166-A	C6 BOARD MOUNTED (KV-XA25M60/M63)	

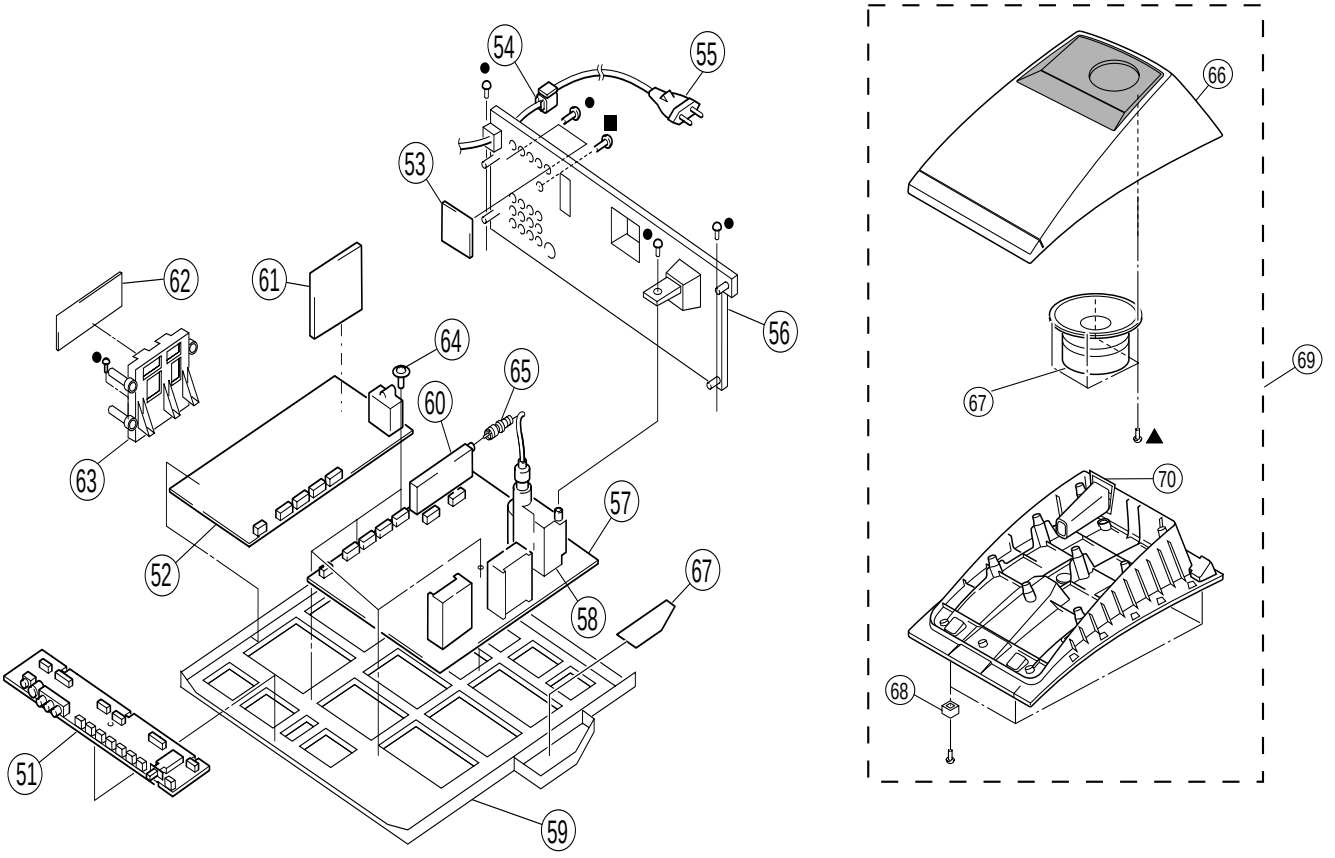
REF. NO.		PART NO.	DESCRIPTION	REMARK
16	*	A-1342-590-A	VM1 BOARD MOUNTED (KV-XA25N90)	
	*	A-1342-602-A	VM1 BOARD MOUNTED (KV-XA25M60/M63)	
17		4-078-765-11	SPRING, EXTENSION	
18	⚠	1-419-322-31	COIL, DEGAUSSING (KV-XA25M60/M63)	
	⚠	1-419-086-21	COIL, DEGAUSSING (KV-XA25N90)	
19	*	4-063-935-21	CUSHION (50 x 550), DGC (KV-XA25M60/M63)	
		4-063-935-11	CUSHION (50 x 550), DGC (KV-XA25N90)	
20		4-079-376-01	BAND, DGC	
21	*	4-065-572-01	CLIP (25 RSN), DGC	
22		4-064-883-03	HOLDER, DGC	
23		1-452-032-00	MAGNET, DISC	
24		1-452-094-00	CIRCULAR DISC MAGNET B	
25		X-4387-214-3	PERMALOY ASSY, CORRECTION (KV-XA25N90)	
		4-051-734-42	PIECE B (120), CONV CORRECT (KV-XA25M60/M63)	
26		4-302-404-03	SCREW (WASHER HEAD) (+P 4 x 16)	
27		1-529-190-11	SPEAKER (5 CM)	
28		1-503-902-11	SPEAKER (15 x 6.5 CM)	
29		4-374-745-21	CUSHION A	
30	*	4-046-981-02	BRACKET, SPEAKER	
31		4-080-624-01	COVER REAR (■ 11)	

7-2. CHASSIS

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16

7-3. 3D SPEAKER (KV-XA25M63 0NLY)

▲ : 7-685-661-14 SCREW +BVTP 4 × 12



REF. NO.		PART NO.	DESCRIPTION	REMARK
51	*	A-1372-945-A	H BOARD MOUNTED (KV-XA25M60)	
	*	A-1372-969-A	H BOARD MOUNTED (KV-XA25M63)	
	*	A-1372-966-A	H BOARD MOUNTED (KV-XA25N90)	
52	*	A-1136-184-A	B BOARD MOUNTED (KV-XA25M60)	
	*	A-1136-198-A	B BOARD MOUNTED (KV-XA25M63)	
	*	A-1136-160-A	B BOARD MOUNTED (KV-XA25N90)	
53	*	A-1388-307-A	J1 BOARD MOUNTED (KV-XA25M60)	
	*	A-1388-315-A	J BOARD MOUNTED (KV-XA25M63)	
	*	A-1388-301-A	J1 BOARD MOUNTED (KV-XA25N90)	
54	⚠	4-022-115-12	HOLDER, AC CORD (KV-XA25N90)	
	⚠	4-022-115-31	HOLDER, AC CORD (KV-XA25M60/M63)	
55	⚠	1-575-023-11	CORD, POWER (WITH CONNECTOR)	
56	*	4-081-023-01	BRACKET, TERMINAL (■ 1) (KV-XA25M60)	
	*	4-066-684-62	BRACKET, TERMINAL (■ 1) (KV-XA25M63)	
	*	4-081-023-21	BRACKET, TERMINAL (■ 1) (KV-XA25N90)	
57	*	A-1299-449-A	A BOARD COMPLETE (KV-XA25M60)	
	*	A-1299-478-A	A BOARD COMPLETE (KV-XA25M63)	
	*	A-1299-474-A	A BOARD COMPLETE (KV-XA25N90)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
58	⚠	1-453-357-21	TRANSFORMER ASSY, FLYBACK (NX-4009//M3B4)	
59	*	4-066-681-05	BRACKET, MAIN (7 SCREWS (3X12), (+BVTAP)	
60		8-598-451-00	TUNER, FSS BTF-WG441 (KV-XA25M60/M63)	
		8-598-477-30	TUNER, FSS BTF-WG411 (KV-XA25N90)	
61	*	A-1131-705-A	B1 BOARD MOUNTED (KV-XA25M60/M63)	
	*	A-1131-652-A	B1 BOARD MOUNTED (KV-XA25N90)	
62	*	A-1241-471-A	F BOARD MOUNTED (KV-XA25M60/M63)	
	*	A-1241-456-A	F BOARD MOUNTED (KV-XA25N90)	
63	*	4-066-682-01	BRACKET, F PWB	
64		4-046-797-21	SCREW (3X12), (+)BVTAP	
65		1-573-657-21	PLUG F-PIN (KV-XA25N90 only)	
66	*	4-080-405-01	3D BOX, TOP	
67		1-505-937-31	SPEAKER (10 CM) (▲ 4 SCREWS)	
68	*	4-068-528-A	FOOT	
69		A-1501-885-A	3D BOX ASSY (▲ 11 SCREWS)	
70	*	4-080-406-01	DUCT SPEAKER	

SECTION 8
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

REF. NO.	PART NO.	DESCRIPTION		REMARK
	* A-1299-449-A	A BOARD COMPLETE (KV-XA25M60)		
	* A-1299-478-A	A BOARD COMPLETE (KV-XA25M63)		
	* A-1299-474-A	A BOARD COMPLETE (KV-XA25N90)		
		**********		
	* 4-040-983-21	TERMINAL BOARD (D)		
	4-382-854-11	SCREW (M3X10), P, SW (+)		
	4-382-854-21	SCREW (M3X14), P, SW (+)		
		<CAPACITOR>		
C004	1-163-001-11	CERAMIC CHIP	220PF	10.00% 50V
C005	1-163-001-11	CERAMIC CHIP	220PF	10.00% 50V
C006	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C007	1-104-664-11	ELECT	47UF	20.00% 16V
C013	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V
C014	1-104-664-11	ELECT	47UF	20.00% 25V
C015	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V
C016	1-163-243-11	CERAMIC CHIP	47PF	5.00% 50V
C017	1-163-113-00	CERAMIC CHIP	68PF	5.00% 50V
C019	1-104-664-11	ELECT	47UF	20.00% 25V
C020	1-163-259-91	CERAMIC CHIP	220PF	5.00% 50V
C022	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V
C023	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V
C024	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V
C026	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C027	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C028	1-163-037-11	CERAMIC CHIP	0.022UF	10.00% 50V
C030	1-126-965-11	ELECT	22UF	20.00% 50V
C031	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C032	1-107-823-11	CERAMIC CHIP	0.47UF	10.00% 16V
C034	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C041	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C042	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C043	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C044	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C047	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C048	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C050	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C051	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C053	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V
C056	1-163-263-11	CERAMIC CHIP	330PF	5.00% 50V
C101	1-126-964-11	ELECT (KV-XA25N90 ONLY)	10UF	20.00% 50V
C103	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C104	1-104-665-11	ELECT	100UF	20.00% 10V
C106	1-163-035-00	CERAMIC CHIP (KV-XA25N90 ONLY)	0.047UF	50V
C107	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V
C108	1-104-664-11	ELECT	47UF	20.00% 16V
C109	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V
C110	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V
C111	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V
C112	1-104-664-11	ELECT	47UF	20.00% 16V
C113	1-104-664-11	ELECT	47UF	20.00% 25V
C114	1-126-967-11	ELECT	47UF	20.00% 50V
C118	1-110-501-11	CERAMIC CHIP	0.33UF	10.00% 16V
C300	1-164-505-11	CERAMIC CHIP	2.2UF	16V
C301	1-126-941-11	ELECT (KV-XA25M60/XA25M63)	470UF	20.00% 25V
C301	1-126-935-11	ELECT (KV-XA25N90)	470UF	20.00% 16V
C302	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V
C303	1-126-959-11	ELECT	0.47UF	20.00% 50V
C304	1-126-967-11	ELECT	47UF	20.00% 50V
C305	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C306	1-163-233-11	CERAMIC CHIP	18PF	5.00% 50V
C307	1-163-233-11	CERAMIC CHIP	18PF	5.00% 50V
C308	1-163-259-91	CERAMIC CHIP	220PF	5.00% 50V
C309	1-137-378-11	MYLAR	0.22UF	5.00% 50V
C311	1-126-964-11	ELECT	10UF	20.00% 50V
C312	1-164-346-11	CERAMIC CHIP	1UF	16V
C313	1-164-346-11	CERAMIC CHIP	1UF	16V
C314	1-164-346-11	CERAMIC CHIP	1UF	16V
C315	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C316	1-126-934-11	ELECT	220UF	20.00% 16V
C317	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C318	1-163-031-11	CERAMIC CHIP	0.01UF	50V
C319	1-163-031-11	CERAMIC CHIP	0.01UF	50V
C320	1-163-031-11	CERAMIC CHIP	0.01UF	50V
C321	1-164-489-11	CERAMIC CHIP	0.22UF	10.00% 16V
C322	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V
C324	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V
C325	1-126-960-11	ELECT	1UF	20.00% 50V
C327	1-126-965-11	ELECT	22UF	20.00% 50V
C328	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C329	1-126-963-11	ELECT	4.7UF	20.00% 50V
C330	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C331	1-126-963-11	ELECT	4.7UF	20.00% 50V
C332	1-126-963-11	ELECT	4.7UF	20.00% 50V
C335	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C336	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C337	1-126-961-11	ELECT	2.2UF	20.00% 50V
C341	1-115-340-11	CERAMIC CHIP	0.22UF	10.00% 25V
C342	1-163-259-91	CERAMIC CHIP	220PF	5.00% 50V

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REF. NO.		PART NO.	DESCRIPTION		REMARK
C347		1-126-933-11	ELECT	100UF 20.00% 16V	
C348		1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	
C349		1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	
C350		1-163-031-11	CERAMIC CHIP	0.01UF 50V	
C351		1-126-964-11	ELECT	10UF 20.00% 50V	
C352		1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	
C353		1-126-960-11	ELECT	1UF 20.00% 50V	
C356		1-104-664-11	ELECT	47UF 20.00% 16V	
C357		1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	
C502		1-163-275-11	CERAMIC CHIP	0.001UF 5.00% 50V	
C506		1-107-638-11	ELECT	33UF 20.00% 160V	
C507		1-161-830-00	CERAMIC	0.0047UF 500V	
C510		1-102-112-00	CERAMIC	330PF 10.00% 50V	
C512		1-163-989-11	CERAMIC CHIP	0.033UF 10.00% 25V	
C513		1-163-263-11	CERAMIC CHIP	330PF 5.00% 50V	
C514		1-106-383-00	MYLAR	0.047UF 10.00% 200V	
C517		1-164-182-11	CERAMIC CHIP	0.0033UF 10.00% 50V	
C518		1-104-665-11	ELECT	100UF 20.00% 10V	
C519		1-102-212-00	CERAMIC	820PF 10.00% 500V	
C521		1-126-934-11	ELECT	220UF 20.00% 16V	
C522		1-126-933-11	ELECT	100UF 20.00% 16V	
C523		1-102-002-00	CERAMIC	680PF 10.00% 500V	
C524		1-126-967-11	ELECT	47UF 20.00% 50V	
C526		1-130-495-00	MYLAR	0.1UF 5.00% 50V	
C527		1-102-820-00	CERAMIC	330PF 5.00% 50V	
C528		1-161-754-00	CERAMIC	0.001UF 10.00% 2KV	
C530		1-137-372-11	MYLAR	0.022UF 5.00% 50V	
C531		1-107-903-11	ELECT	2.2UF 20.00% 50V	
C532		1-126-941-11	ELECT	470UF 20.00% 25V	
C533		1-126-941-11	ELECT	470UF 20.00% 25V	
C534		1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	
C536		1-136-165-00	FILM	0.1UF 5.00% 50V	
C537		1-126-969-11	ELECT	220UF 20.00% 50V	
C538		1-136-617-11	FILM	0.019UF 3.00% 2KV	
C539		1-130-959-00	FILM	0.047UF 5.00% 400V	
C540		1-136-171-00	FILM	0.33UF 5.00% 50V	
C544		8-719-073-01	MA111-(K8).S0		
C546		1-165-319-11	CERAMIC CHIP	0.1UF 50V	
C548		1-163-243-11	CERAMIC CHIP	47PF 5.00% 50V	
C549		1-163-017-00	CERAMIC CHIP	0.0047UF 10.00% 50V	
C550		1-106-220-00	MYLAR	0.1UF 10.00% 100V	
C551		1-126-960-11	ELECT	1UF 20.00% 50V	
C552		1-162-116-00	CERAMIC	680PF 10.00% 2KV	
C553		1-162-116-00	CERAMIC	680PF 10.00% 2KV	
C554		1-107-364-11	MYLAR	0.01UF 10.00% 200V	
C556		1-126-941-11	ELECT	470UF 20.00% 25V	
C557		1-126-941-11	ELECT	470UF 20.00% 25V	
C558		1-123-024-21	ELECT	33UF 160V	
C560		1-102-228-00	CERAMIC	470PF 10.00% 500V	
C561		1-129-708-91	FILM	0.0033UF 5.00% 630V	
C562		1-102-228-00	CERAMIC	470PF 10.00% 500V	
C564		1-163-038-11	CERAMIC CHIP	0.1UF 25V	
C565		1-107-655-11	ELECT	47UF 20.00% 250V	
C566		1-102-244-00	CERAMIC	220PF 10.00% 500V	
C567		1-115-520-11	FILM	0.68UF 5.00% 250V	
C568		1-102-228-00	CERAMIC	470PF 10.00% 500V	
C570		1-115-521-11	FILM	0.82UF 5.00% 250V	

REF. NO.		PART NO.	DESCRIPTION		REMARK
C572		1-107-846-11	FILM	0.1UF 5.00% 250V	
C573		1-106-379-12	MYLAR	0.033UF 10.00% 200V	
C574		1-107-636-11	ELECT	10UF 20.00% 160V	
C576		1-130-495-00	MYLAR	0.1UF 5.00% 50V	
C577		1-106-395-00	MYLAR	0.15UF 10.00% 200V	
C582		1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	
C586		1-216-295-11	SHORT	0	
C600	⚠	1-104-705-11	MYLAR	0.1UF 20.00% 250V	
C601		1-129-720-00	FILM (KV-XA25M60/XA25M63 ONLY)	0.033UF 5.00% 630V	
C602	⚠	1-104-705-11	MYLAR	0.1UF 20.00% 250V	
C603		1-104-664-11	ELECT	47UF 20.00% 25V	
C604		1-163-009-11	CERAMIC CHIP	0.001UF 10.00% 50V	
C605	⚠	1-119-886-51	CERAMIC	470PF 10.00% 250V	
C606	⚠	1-119-886-51	CERAMIC	470PF 10.00% 250V	
C607		1-161-830-00	CERAMIC	0.0047UF 99% 500V	
C608		1-161-830-00	CERAMIC	0.0047UF 99% 500V	
C609		1-126-968-11	ELECT	100UF 20.00% 50V	
C610		1-126-964-11	ELECT	10UF 20.00% 50V	
C611		1-161-830-00	CERAMIC	0.0047UF 99% 500V	
C612		1-161-830-00	CERAMIC	0.0047UF 99% 500V	
C613		1-125-906-11	ELECT (KV-XA25M60/XA25M63)	560UF 20.00% 450V	
C613		1-113-611-11	ELECT(BLOCK) (KV-XA25N90)	820UF 20.00% 250V	
C614		1-126-964-11	ELECT	10UF 20.00% 50V	
C615	⚠	1-119-886-51	CERAMIC	470PF 10.00% 250V	
C616		1-130-202-00	FILM (KV-XA25M60/XA25M63 ONLY)	0.022UF 5.00% 400V	
C617		1-107-792-11	CERAMIC (KV-XA25M60/XA25M63 ONLY)	100PF 5.00% 1KV	
C618		1-125-893-11	FILM	680PF 3.00% 1.5KV	
C619	⚠	1-119-886-51	CERAMIC	470PF 10.00% 250V	
C620		1-163-133-00	CERAMIC CHIP	470PF 5.00% 50V	
C621		1-102-114-00	CERAMIC	470PF 10.00% 50V	
C622		1-102-119-00	CERAMIC	0.0015UF 10.00% 50V	
C623		1-104-665-11	ELECT	100UF 20.00% 25V	
C624		1-104-331-11	CERAMIC	0.0022UF 10.00% 1KV	
C626		1-102-002-00	CERAMIC	680PF 10.00% 500V	
C627		1-102-002-00	CERAMIC (KV-XA25M63 ONLY)	680PF 10.00% 500V	
C628		1-126-952-11	ELECT (KV-XA25M63 ONLY)	1000UF 20.00% 35V	
C629		1-126-964-11	ELECT	10UF 20.00% 50V	
C630		1-125-494-11	ELECT(BLOCK)	560UF 20.00% 160V	
C631		1-128-550-11	ELECT	2200UF 20.00% 50V	
C632		1-128-339-11	ELECT	2200UF 20.00% 16V	
C633		1-104-999-11	MYLAR	0.1UF 10.00% 200V	
C634		1-126-933-11	ELECT	100UF 20.00% 16V	
C635		1-104-665-11	ELECT	100UF 20.00% 10V	
C636		1-104-760-11	CERAMIC CHIP	0.047UF 10.00% 50V	
C638		1-161-830-00	CERAMIC (KV-XA25M63 ONLY)	0.0047UF 500V	
C641		1-102-002-00	CERAMIC	680PF 10.00% 500V	
C642		1-126-943-11	ELECT	2200UF 20.00% 25V	
C643		1-104-665-11	ELECT	100UF 20.00% 10V	

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REF. NO.		PART NO.	DESCRIPTION			REMARK
C644		1-104-331-11	CERAMIC	0.0022UF	10.00%	1KV
C645		1-137-605-11	MYLAR	0.01UF	10.00%	250V
C646		1-107-679-41	ELECT	10UF	20.00%	450V
C647		1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C649		1-126-940-11	ELECT	330UF	20.00%	25V
C650		1-163-275-11	CERAMIC CHIP	0.001UF	5.00%	50V
C651		1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C652		1-126-965-11	ELECT	22UF	20.00%	50V
C653		1-104-664-11	ELECT	47UF	20.00%	25V
C655	⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C657		1-101-821-00	CERAMIC	0.0022UF		500V
C659		1-162-116-00	CERAMIC	680PF	10.00%	2KV
C912		1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C913		1-104-665-11	ELECT	100UF	20.00%	10V
			<CONNECTOR>			
CN101	*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P			
CN102	*	1-779-889-11	CONNECTOR, BOARD TO BOARD 8P			
CN104		1-695-915-11	TAB (CONTACT)			
CN105		1-695-915-11	TAB (CONTACT)			
CN106	*	1-564-506-11	PLUG, CONNECTOR 3P			
CN201	*	1-564-508-11	PLUG, CONNECTOR 5P			
CN202	*	1-508-847-00	PIN, CONNECTOR 4P			
CN303	*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P			
CN305	*	1-564-509-11	PLUG, CONNECTOR 6P			
CN306	*	1-564-507-11	PLUG, CONNECTOR 4P			
CN501	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN502	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN505	*	1-564-508-11	PLUG, CONNECTOR 5P			
CN506		4-352-844-01	PIN, LEAD, COATING (KV-XA25N90 ONLY)			
CN507	*	1-564-509-11	PLUG, CONNECTOR 6P			
CN508		1-695-915-11	TAB (CONTACT)			
CN601		1-580-843-11	PIN, CONNECTOR (POWER)			
CN602	*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
CN603	*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P			
CN604	*	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P			
CN605	*	1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M63 ONLY)			
CN608	*	1-564-507-11	PLUG, CONNECTOR 4P			
CN904	*	1-564-512-11	PLUG, CONNECTOR 9P			
			<DIODE>			
D001		8-719-988-61	1SS355TE-17			
D002		8-719-988-61	1SS355TE-17			
D004		1-216-295-11	SHORT	0		
D005		8-719-988-61	1SS355TE-17			
D006		8-719-988-61	1SS355TE-17			
D007		8-719-988-61	1SS355TE-17			
D008		8-719-988-61	1SS355TE-17			
D009		8-719-988-61	1SS355TE-17			
D100		8-719-073-01	MA111-(K8).S0 (KV-XA25M60/XA25M63 ONLY)			
D300		1-216-295-11	SHORT	0		
D301		8-719-988-61	1SS355TE-17			
D306		8-719-988-61	1SS355TE-17			
D307		8-719-988-61	1SS355TE-17			
D308		8-719-988-61	1SS355TE-17			
D309		8-719-069-54	UDZS-TE17-5.1B			

REF. NO.	PART NO.	DESCRIPTION			REMARK
D311	8-719-988-61	1SS355TE-17			
D312	8-719-988-61	1SS355TE-17			
D313	8-719-988-61	1SS355TE-17			
D315	8-719-988-61	1SS355TE-17			
D316	8-719-037-06	RD7.5SB1-T1			
D319	8-719-069-60	UDZS-TE17-9.1B (KV-XA25N90 ONLY)			
D320	8-719-069-60	UDZS-TE17-9.1B			
D321	8-719-069-60	UDZS-TE17-9.1B			
D322	8-719-069-60	UDZS-TE17-9.1B (KV-XA25N90 ONLY)			
D504	8-719-302-43	EL1Z			
D505	8-719-988-61	1SS355TE-17			
D506	8-719-911-19	1SS119-25			
D507	8-719-988-61	1SS355TE-17			
D508	8-719-988-61	1SS355TE-17			
D509	1-216-073-00	RES-CHIP	10K	5%	1/10W
D510	8-719-988-61	1SS355TE-17			
D511	8-719-988-61	1SS355TE-17			
D512	8-719-988-61	1SS355TE-17			
D513	8-719-908-03	GP08D			
D517	8-719-945-80	ERC06-15S			
D518	8-719-312-10	RU4AM-T3 (KV-XA25M60/XA25M63)			
D518	8-719-074-35	RU4AM-T4 (KV-XA25N90)			
D519	8-719-945-80	ERC06-15S			
D520	8-719-073-01	MA111-(K8).S0			
D521	8-719-302-43	EL1Z			
D522	8-719-302-43	EL1Z			
D523	8-719-302-43	EL1Z			
D527	8-719-908-03	GP08D			
D528	8-719-908-03	GP08D			
D531	8-719-988-61	1SS355TE-17			
D532	8-719-988-61	1SS355TE-17			
D534	1-216-295-11	SHORT	0		
D600	8-719-911-19	1SS119-25			
D602	8-719-911-19	1SS119-25			
D603	8-719-150-92	RD33EB3T			
D604	8-719-028-72	RGP02-17EL-6433			
D605	8-719-510-22	D3SB60			
D606	8-719-108-18	5P-6M			
D607	8-719-073-01	MA111-(K8).S0			
D608	8-719-110-53	RD20ES-B2			
D609	8-719-311-31	RU-1P (KV-XA25M60/XA25M63 ONLY)			
D610	8-719-210-21	11EQS04 (KV-XA25M60/XA25M63)			
D610	8-719-043-76	AK04V0 (KV-XA25N90)			
D611	8-719-075-73	10ELS2N-TB5			
D612	8-719-071-38	D5S6M			
D613	8-719-075-73	10ELS2N-TB5			
D614	8-719-075-73	10ELS2N-TB5			
D620	8-719-110-72	RD30ESB2			
D621	8-719-071-38	D5S6M			
D622	8-719-071-39	FMU-G26S			
D623	8-719-978-65	DTZ-TT11-15B			
D624	8-719-073-01	MA111-(K8).S0			
D625	8-719-977-28	DTZ10B			
D628	8-719-911-19	1SS119-25			
D629	8-719-510-37	D5LC20U (KV-XA25M63 ONLY)			
D630	8-719-052-74	FMX-12S (KV-XA25M63)			
D630	8-719-510-37	D5LC20U (KV-XA25M60/XA25N90)			

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REF. NO.	PART NO.	DESCRIPTION	REMARK
D631	8-719-068-00	ERC04-06SE	
D632	8-719-068-00	ERC04-06SE	
D633	8-719-948-45	ERA22-08	
D634	8-719-073-01	MA111-(K8).S0	
D635	8-719-073-01	MA111-(K8).S0	
D636	8-719-510-02	D1NS4	
D637	8-719-109-96	RD6.8ES-B1	
D638	8-719-024-99	11ES2-NTA2B (KV-XA25M60/XA25M63)	
D638	8-719-510-48	D1N20R (KV-XA25N90)	
		<CONNECTOR>	
DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P	
		<FERRITE BEAD>	
FB300	1-412-911-31	FERRITE 0UH	
FB501	1-410-397-21	FERRITE 1.1UH	
FB502	1-410-397-21	FERRITE 1.1UH	
FB600	1-410-397-21	FERRITE 1.1UH	
FB601	1-410-397-21	FERRITE 1.1UH	
FB602	1-410-397-21	FERRITE 1.1UH	
FB603	1-410-397-21	FERRITE 1.1UH	
FB604	1-412-911-31	FERRITE 0UH	
FB605	1-410-397-21	FERRITE 1.1UH	
FB606	1-412-911-31	FERRITE 0UH	
FB607	1-410-397-21	FERRITE 1.1UH (KV-XA25M63 ONLY)	
FB608	1-412-911-31	FERRITE 0UH	
FB611	1-410-397-21	FERRITE 1.1UH	
FB612	1-410-397-21	FERRITE 1.1UH	
FB613	1-410-397-21	FERRITE 1.1UH (KV-XA25M60/XA25M63 ONLY)	
FB615	1-410-397-21	FERRITE 1.1UH (KV-XA25M63)	
FB615	1-412-911-31	FERRITE 0UH (KV-XA25M60/XA25N90)	
		<IC>	
IC001	8-752-917-80	CXP750097-032S (KV-XA25M60/XA25M63)	
IC001	8-752-917-81	CXP750097-033S (KV-XA25N90)	
IC002	8-759-371-21	MM1319AFBE	
IC003	8-759-672-78	M24C08-BN6(A)	
IC100	8-759-042-02	S-80743AL-A7-S (KV-XA25M60/XA25M63 ONLY)	
IC301	8-752-095-72	CXA2159S	
IC302	8-759-666-90	TDA9181T	
IC502	8-759-700-07	NJM2903M	
IC503	8-759-980-58	TDA8172	
IC601	8-749-014-48	STR-F6656	
IC602	8-749-920-61	SE-135N	
IC603	8-759-701-59	NJM78M09FA	
IC604	8-759-231-53	TA7805S	
		<CHIP CONDUCTOR>	
JR001	1-216-295-11	SHORT 0	
JR002	1-216-295-11	SHORT 0	
JR003	1-216-295-11	SHORT 0	
JR004	1-216-295-11	SHORT 0	
JR006	1-216-295-11	SHORT 0	
JR007	1-216-295-11	SHORT 0	
JR008	1-216-295-11	SHORT 0	
JR010	1-216-295-11	SHORT 0	
JR012	1-216-295-11	SHORT 0	
JR014	1-216-295-11	SHORT 0	
JR015	1-216-295-11	SHORT 0	
JR016	1-216-295-11	SHORT 0	
JR020	1-216-295-11	SHORT 0	
JR022	1-216-295-11	SHORT 0	
JR023	1-216-295-11	SHORT 0	
JR024	1-216-295-11	SHORT 0	
JR025	1-216-295-11	SHORT 0	
JR028	1-216-295-11	SHORT 0	
JR030	1-216-295-11	SHORT 0	
JR031	1-216-295-11	SHORT 0	
JR102	1-216-295-11	SHORT 0	
JR107	1-216-295-11	SHORT 0	
JR108	1-216-295-11	SHORT 0 (KV-XA25N90 ONLY)	
JR111	1-216-295-11	SHORT 0 (KV-XA25N90 ONLY)	
JR304	1-216-295-11	SHORT 0	
JR308	1-216-295-11	SHORT 0	
JR309	1-216-295-11	SHORT 0	
JR310	1-216-295-11	SHORT 0	
JR311	1-216-295-11	SHORT 0	
JR500	1-216-295-11	SHORT 0	
JR501	1-216-295-11	SHORT 0	
JR503	1-216-295-11	SHORT 0	
JR505	1-216-295-11	SHORT 0	
JR600	1-216-295-11	SHORT 0	
		<COIL>	
L002	1-414-856-11	INDUCTOR 10UH	
L003	1-414-180-11	INDUCTOR 3.3UH	
L005	1-414-233-22	FERRITE 0UH	
L101	1-414-856-11	INDUCTOR 10UH	
L102	1-414-856-11	INDUCTOR 10UH	
L103	1-414-856-11	INDUCTOR 10UH	
L104	1-414-856-11	INDUCTOR 10UH	
L105	1-414-856-11	INDUCTOR 10UH	
L301	1-414-189-31	INDUCTOR 100UH	
L302	1-414-185-41	INDUCTOR 22UH	
L303	1-414-189-31	INDUCTOR 100UH	
L304	1-414-189-31	INDUCTOR 100UH	
L501	1-412-525-31	INDUCTOR 10UH	
L502	1-422-613-11	COIL, AIR CORE	
L503	1-412-525-31	INDUCTOR 10UH	
L504	1-412-525-31	INDUCTOR 10UH	
L507	1-459-111-00	INDUCTOR 10MH	
L511	1-406-978-11	INDUCTOR 150UH	
L512	1-412-549-31	INDUCTOR 1MH	
L513	1-412-549-31	INDUCTOR 1MH	
L515	1-459-104-00	COIL, WITH CORE	
L518	1-414-187-11	INDUCTOR 47UH	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A

REF. NO.	PART NO.	DESCRIPTION	REMARK
L601	1-412-527-11	INDUCTOR 15UH	
L905	1-414-856-11	INDUCTOR 10UH	
		<PHOTO COUPLER>	
PH600 ⚠	8-749-924-35	ON3171-R	
		<TRANSISTOR>	
Q001	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q001	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q002	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q002	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q005	8-729-900-51	DTA114TK	
Q101	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q101	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q301	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q301	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q302	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q302	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q303	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q303	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q304	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q304	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q305	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q305	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q306	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q306	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q307	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q307	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q308	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q308	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q309	8-729-421-19	UN2213	
Q310	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q310	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q311	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q311	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q312	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q312	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q313	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q313	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q314	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q314	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q315	8-729-421-19	UN2213	
Q316	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q316	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q317	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q317	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q503	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q503	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q505	8-729-931-45	IRF614	
Q506	8-729-119-80	2SC2688-LK	
Q507	8-729-026-49	2SA1037AK-T146-R (KV-XA25M60/XA25M63)	
Q507	8-729-216-22	2SA1162-G (KV-XA25N90)	
Q505	8-729-931-45	IRF614	
Q509	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q509	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q505	8-729-931-45	IRF614	
Q511	8-729-048-07	2SD2578-CA	
Q600	8-729-119-78	2SC2785-HFE	
Q601	8-729-023-22	2SD2114K	
Q602	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q602	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q603	8-729-424-08	UN2111	
Q604	8-729-200-17	2SA1091-O	
Q605	8-729-044-30	2SK2845-LB102	
Q606	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q606	8-729-230-49	2SC2712-YG (KV-XA25N90)	
Q607	8-729-922-37	2SD2144S-UVW	
Q608	8-729-120-28	2SC1623-L5L6 (KV-XA25M60/XA25M63)	
Q608	8-729-230-49	2SC2712-YG (KV-XA25N90)	
		<RESISTOR>	
R001	1-414-233-22	FERRITE 0UH	
R002	1-216-025-11	RES-CHIP 100 5% 1/10W	
R003	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R004	1-216-025-11	RES-CHIP 100 5% 1/10W	
R005	1-216-025-11	RES-CHIP 100 5% 1/10W	
R006	1-216-689-11	RES-CHIP 39K 5% 1/10W (KV-XA25N90 ONLY)	
R007	1-216-033-00	RES-CHIP 220 5% 1/10W (KV-XA25N90 ONLY)	
R008	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R009	1-216-065-91	RES-CHIP 4.7K 5% 1/10W (KV-XA25N90 ONLY)	
R010	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R011	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R012	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R013	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R014	1-216-025-11	RES-CHIP 100 5% 1/10W	
R015	1-216-025-11	RES-CHIP 100 5% 1/10W	
R018	1-216-033-00	RES-CHIP 220 5% 1/10W	
R019	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R020	1-216-045-00	RES-CHIP 680 5% 1/10W	
R021	1-216-073-00	RES-CHIP 10K 5% 1/10W	
R022	1-216-025-11	RES-CHIP 100 5% 1/10W	
R023	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R024	1-216-063-91	RES-CHIP 3.9K 5% 1/10W	
R025	1-216-063-91	RES-CHIP 3.9K 5% 1/10W	
R026	1-216-063-91	RES-CHIP 3.9K 5% 1/10W	
R027	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R028	1-216-073-00	RES-CHIP 10K 5% 1/10W (KV-XA25M60/XA25M63)	
R028	1-216-049-11	RES-CHIP 1K 5% 1/10W (KV-XA25N90)	
R029	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R030	1-216-025-11	RES-CHIP 100 5% 1/10W (KV-XA25N90 ONLY)	
R031	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R032	1-216-025-11	RES-CHIP 100 5% 1/10W	
R034	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R035	1-216-025-11	RES-CHIP 100 5% 1/10W	
R036	1-216-025-11	RES-CHIP 100 5% 1/10W	
R037	1-216-025-11	RES-CHIP 100 5% 1/10W (KV-XA25M60/XA25M63)	

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R037	1-216-083-00	RES-CHIP	27K	5%	1/10W
		(KV-XA25N90)			
R038	1-216-049-11	RES-CHIP	1K	5%	1/10W
R040	1-216-025-11	RES-CHIP	100	5%	1/10W
R041	1-216-025-11	RES-CHIP	100	5%	1/10W
R042	1-216-295-11	SHORT	0		
R043	1-216-049-11	RES-CHIP	1K	5%	1/10W
R044	1-216-025-11	RES-CHIP	100	5%	1/10W
R045	1-414-233-22	FERRITE	0UH		
R046	1-216-049-11	RES-CHIP	1K	5%	1/10W
R047	1-414-233-22	FERRITE	0UH		
R048	1-216-073-00	RES-CHIP	10K	5%	1/10W
R050	1-216-073-00	RES-CHIP	10K	5%	1/10W
R053	1-216-049-11	RES-CHIP	1K	5%	1/10W
R058	1-216-295-11	SHORT	0		
R059	1-216-295-11	SHORT	0		
R060	1-216-295-11	SHORT	0		
R061	1-216-295-11	SHORT	0		
R062	1-216-041-00	RES-CHIP	470	5%	1/10W
R063	1-216-041-00	RES-CHIP	470	5%	1/10W
R064	1-216-041-00	RES-CHIP	470	5%	1/10W
R065	1-216-041-00	RES-CHIP	470	5%	1/10W
R066	1-216-049-11	RES-CHIP	1K	5%	1/10W
R067	1-216-049-11	RES-CHIP	1K	5%	1/10W
R068	1-216-041-00	RES-CHIP	470	5%	1/10W
R101	1-216-025-11	RES-CHIP	100	5%	1/10W
		(KV-XA25M60/XA25M63 ONLY)			
R102	1-216-025-11	RES-CHIP	100	5%	1/10W
		(KV-XA25M60/XA25M63 ONLY)			
R103	1-216-025-11	RES-CHIP	100	5%	1/10W
		(KV-XA25N90 ONLY)			
R104	1-216-025-11	RES-CHIP	100	5%	1/10W
		(KV-XA25N90 ONLY)			
R105	1-216-295-11	SHORT	0		
R106	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-XA25N90 ONLY)			
R109	1-216-041-00	RES-CHIP	470	5%	1/10W
R111	1-216-025-11	RES-CHIP	100	5%	1/10W
R112	1-216-025-11	RES-CHIP	100	5%	1/10W
R113	1-216-025-11	RES-CHIP	100	5%	1/10W
R114	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(KV-XA25N90 ONLY)			
R115	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(KV-XA25N90 ONLY)			
R225	1-216-033-00	RES-CHIP	220	5%	1/10W
R226	1-216-033-00	RES-CHIP	220	5%	1/10W
R227	1-216-033-00	RES-CHIP	220	5%	1/10W
R237	1-216-295-11	SHORT	0		
R301	1-216-113-00	RES-CHIP	470K	5%	1/10W
R302	1-216-295-11	SHORT	0		
R303	1-216-049-11	RES-CHIP	1K	5%	1/10W
R304	1-216-073-00	RES-CHIP	10K	5%	1/10W
R308	1-216-025-11	RES-CHIP	100	5%	1/10W
R309	1-216-025-11	RES-CHIP	100	5%	1/10W
R310	1-216-025-11	RES-CHIP	100	5%	1/10W
R311	1-216-041-00	RES-CHIP	470	5%	1/10W
R312	1-216-039-00	RES-CHIP	390	5%	1/10W
R313	1-216-037-00	RES-CHIP	330	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R314	1-216-083-00	RES-CHIP	27K	5%	1/10W
R315	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R316	1-216-037-00	RES-CHIP	330	5%	1/10W
R317	1-216-091-00	RES-CHIP	56K	5%	1/10W
R318	1-216-039-00	RES-CHIP	390	5%	1/10W
R319	1-216-025-11	RES-CHIP	100	5%	1/10W
R320	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R321	1-216-073-00	RES-CHIP	10K	5%	1/10W
R322	1-216-033-00	RES-CHIP	220	5%	1/10W
R323	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R324	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R326	1-216-029-00	RES-CHIP	150	5%	1/10W
R327	1-216-033-00	RES-CHIP	220	5%	1/10W
R328	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R329	1-216-041-00	RES-CHIP	470	5%	1/10W
R331	1-216-295-11	SHORT	0		
R332	1-216-033-00	RES-CHIP	220	5%	1/10W
R335	1-216-045-00	RES-CHIP	680	5%	1/10W
R338	1-216-037-00	RES-CHIP	330	5%	1/10W
R339	1-216-033-00	RES-CHIP	220	5%	1/10W
R340	1-216-025-11	RES-CHIP	100	5%	1/10W
R345	1-216-081-00	RES-CHIP	22K	5%	1/10W
R348	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R349	1-216-073-00	RES-CHIP	10K	5%	1/10W
R350	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R351	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R354	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R355	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R356	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R357	1-216-079-00	RES-CHIP	18K	5%	1/10W
R358	1-216-049-11	RES-CHIP	1K	5%	1/10W
R359	1-216-033-00	RES-CHIP	220	5%	1/10W
R360	1-216-033-00	RES-CHIP	220	5%	1/10W
R361	1-216-073-00	RES-CHIP	10K	5%	1/10W
R362	1-216-075-00	RES-CHIP	12K	5%	1/10W
R363	1-216-079-00	RES-CHIP	18K	5%	1/10W
R364	1-216-295-11	SHORT	0		
R365	1-216-033-00	RES-CHIP	220	5%	1/10W
R366	1-216-073-00	RES-CHIP	10K	5%	1/10W
R367	1-216-073-00	RES-CHIP	10K	5%	1/10W
R368	1-216-073-00	RES-CHIP	10K	5%	1/10W
R370	1-216-033-00	RES-CHIP	220	5%	1/10W
R371	1-216-083-00	RES-CHIP	27K	5%	1/10W
R372	1-216-091-00	RES-CHIP	56K	5%	1/10W
R376	1-216-081-00	RES-CHIP	22K	5%	1/10W
R377	1-216-121-11	RES-CHIP	1M	5%	1/10W
R378	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R379	1-218-179-11	RES-CHIP	10M	5%	1/10W
R381	1-216-295-11	SHORT	0		
R382	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R383	1-216-049-11	RES-CHIP	1K	5%	1/10W
R384	1-216-041-00	RES-CHIP	470	5%	1/10W
R385	1-216-029-00	RES-CHIP	150	5%	1/10W
R391	1-216-295-11	SHORT	0		
R500	1-249-417-11	CARBON	1K	5%	1/4W
R501	1-216-049-11	RES-CHIP	1K	5%	1/10W
R505	1-216-105-91	RES-CHIP	220K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A

REF. NO.	PART NO.	DESCRIPTION			REMARK
R506	1-216-089-11	RES-CHIP	47K	5%	1/10W
R507	1-249-389-11	CARBON	4.7	5%	1/4W
R508	1-216-473-11	METAL OXIDE	56	5%	3W
R509	1-216-475-11	METAL OXIDE	120	5%	3W
R510	1-215-884-11	METAL OXIDE	47	5%	2W
R511	1-215-910-00	METAL OXIDE	68	5%	3W
R515	1-215-913-11	METAL OXIDE	220	5%	3W
R516	1-216-081-00	RES-CHIP	22K	5%	1/10W
R518	1-247-807-31	CARBON	100	5%	1/4W
R519	1-215-913-11	METAL OXIDE	220	5%	3W
R520	1-249-429-11	CARBON	10K	5%	1/4W
R522	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R523	1-249-411-11	CARBON	330	5%	1/4W
R526	1-208-804-11	METAL CHIP	8.2K	0.5%	1/10W
R527	1-216-001-00	RES-CHIP	10	5%	1/10W
R528	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R529	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R531	1-247-843-11	CARBON	3.3K	5%	1/4W
R533	1-249-417-11	CARBON	1K	5%	1/4W
R534	1-216-361-00	METAL OXIDE	0.22	5%	2W
R535	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R536	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R537	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R540	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R541	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R542	1-216-295-11	SHORT	0		
R543	1-216-437-00	METAL OXIDE	5.6K	5%	1W
R544	1-215-917-11	METAL OXIDE	1K	5%	3W
R545	1-216-077-91	RES-CHIP	15K	5%	1/10W
R546	1-216-077-91	RES-CHIP	15K	5%	1/10W
R547	1-216-085-00	RES-CHIP	33K	5%	1/10W
R549	1-215-453-00	METAL	22K	1%	1/4W
R550	1-216-097-11	RES-CHIP	100K	5%	1/10W
R551	1-249-421-11	CARBON	2.2K	5%	1/4W
R552	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R553	1-215-453-00	METAL	22K	1%	1/4W
R554	1-215-457-00	METAL	33K	1%	1/4W
R556	1-215-437-00	METAL	4.7K	1%	1/4W
R558	1-247-843-11	CARBON	3.3K	5%	1/4W
R559	1-249-429-11	CARBON	10K	5%	1/4W
R560	1-216-073-00	RES-CHIP	10K	5%	1/10W
R562	1-249-401-11	CARBON	47	5%	1/4W
R565	1-216-073-00	RES-CHIP	10K	5%	1/10W
R567	1-216-105-91	RES-CHIP	220K	5%	1/10W
R568	1-249-383-11	CARBON	1.5	5%	1/4W
R570	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R571	1-215-443-00	METAL	8.2K	1%	1/4W
R573	1-216-089-11	RES-CHIP	47K	5%	1/10W
R574	1-216-113-00	RES-CHIP	470K	5%	1/10W
R577	1-215-913-11	METAL OXIDE	220	5%	3W
R578	1-216-369-00	METAL OXIDE	1	5%	2W
R579	1-216-097-11	RES-CHIP	100K	5%	1/10W
R580	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R581	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R583	1-216-109-00	RES-CHIP	330K	5%	1/10W
R584	1-216-295-11	SHORT	0		
R585	1-249-385-11	CARBON	2.2	5%	1/4W
R588	1-215-888-00	METAL OXIDE	220	5%	2W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R589	1-215-888-00	METAL OXIDE	220	5%	2W
R590	1-215-465-00	METAL	68K	1%	1/4W
R591	1-260-288-11	CARBON	0.47	5%	1/2W
R593	1-260-288-11	CARBON	0.47	5%	1/2W
R594	1-260-288-11	CARBON	0.47	5%	1/2W
R596	1-215-917-11	METAL OXIDE	1K	5%	3W
R597	1-247-750-11	CARBON	680	5%	1/2W
R598	1-249-438-11	CARBON	56K	5%	1/4W
R599	1-249-389-11	CARBON	4.7	5%	1/4W
R600	1-249-438-11	CARBON	56K	5%	1/4W
R601	1-249-419-11	CARBON	1.5K	5%	1/4W
R602	1-249-389-11	CARBON	4.7	5%	1/4W
R603	1-215-485-00	METAL	470K	1%	1/4W
R604	1-216-097-11	RES-CHIP	100K	5%	1/10W
R607	1-249-425-11	CARBON	4.7K	5%	1/4W
R608	1-240-205-91	CARBON	22M	5%	1/2W
R609	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R610	1-216-073-00	RES-CHIP	10K	5%	1/10W
R611	1-216-089-11	RES-CHIP	47K	5%	1/10W
R612	1-216-045-00	RES-CHIP	680	5%	1/10W
R614	1-216-041-00	RES-CHIP	470	5%	1/10W
R615	1-216-369-00	METAL OXIDE	1	5%	2W
R616	1-260-302-51	CARBON	6.8	5%	1/2W
R617	1-247-791-91	CARBON	22	5%	1/4W
R619	1-260-128-11	CARBON	270K	5%	1/2W
R620	1-129-719-00	FILM	0.027UF	5.00%	400V
		(KV-XA25N90 ONLY)			
R621	1-215-864-00	METAL OXIDE	150	5%	1W
R623	1-216-095-00	RES-CHIP	82K	5%	1/10W
R624	1-216-089-11	RES-CHIP	47K	5%	1/10W
R626	1-216-049-11	RES-CHIP	1K	5%	1/10W
R627	1-240-251-11	CMT-MELF	6.8	5%	10W
R629	1-247-747-11	CARBON	470	5%	1/2W
R630	1-249-429-11	CARBON	10K	5%	1/4W
R631	1-216-089-11	RES-CHIP	47K	5%	1/10W
R632	1-220-886-11	FUSIBLE	0.1	10%	1W
R634	⚠ 1-218-265-11	METAL	8.2M	5%	1W
R635	1-216-492-11	METAL OXIDE	82K	5%	3W
		(KV-XA25M60/XA25M63 ONLY)			
R636	1-215-924-00	METAL OXIDE	15K	5%	3W
R637	1-216-492-11	METAL OXIDE	82K	5%	3W
		(KV-XA25M60/XA25M63 ONLY)			
R639	1-216-361-00	METAL OXIDE	0.22	5%	2W
R640	1-249-415-11	CARBON	680	5%	1/4W
R641	1-216-361-00	METAL OXIDE	0.22	5%	2W
R642	1-249-419-11	CARBON	1.5K	5%	1/4W
R643	1-247-843-11	CARBON	3.3K	5%	1/4W
R644	1-249-419-11	CARBON	1.5K	5%	1/4W
R646	1-215-924-00	METAL OXIDE	15K	5%	3W
R647	1-249-387-11	CARBON	3.3	5%	1/4W
R648	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R649	1-249-417-11	CARBON	1K	5%	1/4W
R650	1-215-882-00	METAL OXIDE	22	5%	2W
R652	1-215-900-11	METAL OXIDE	22K	5%	2W
R653	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R654	1-216-369-00	METAL OXIDE	1	5%	2W
R656	1-249-417-11	CARBON	1K	5%	1/4W
R657	1-260-127-11	CARBON	220K	5%	1/2W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A B

REF. NO.	PART NO.	DESCRIPTION			REMARK
R659	1-216-049-11	RES-CHIP	1K	5%	1/10W
R660	1-216-073-00	RES-CHIP	10K	5%	1/10W
R661	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R682	1-219-134 -11	FUSIBLE	0.1	10%	1/4W
R909	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R910	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		<RELAY>			
RY600 ⚠	1-755-214-11	RELAY, AC POWER			
RY601 ⚠	1-755-214-11	RELAY, AC POWER			
		<SWITCH>			
S501	1-572-707-11	SWITCH, LEVER			
S502	1-572-707-11	SWITCH, LEVER			
		<TRANSFORMER>			
T501	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE			
T503 ⚠	1-453-357-21	TRANSFORMER ASSY FLYBACK (NX-4009//M3B4)			
T504	1-435-122-11	TRANSFORMER, HORIZONTAL LINEAR			
T505	1-426-981-11	TRANSFORMER, FERRITE (PMT)			
T601 ⚠	1-424-505-11	TRANSFORMER, LINE FILTER			
T603 ⚠	1-431-946-11	TRANSFORMER, CONVERTER			
T604 ⚠	1-431-852-11	TRANSFORMER, CONVERTER (SRT)			
		<THERMISTOR>			
TH600	1-803-586-11	THERMISTOR, NTC			
		<THERMISTOR>			
THP600	1-803-540-11	THERMISTOR			
		<TUNER>			
TU101	8-598-451-00	TUNER, FSS BTF-WG441 (KV-XA25M60/XA25M63)			
TU101	8-598-477-30	TUNER, FSS BTF-WG411 (KV-XA25N90)			
		<VARISTOR>			
VDR600	1-803-830-31	VARISTOR (ERZV14D621) (KV-XA25M60/XA25M63 ONLY)			
		<CRYSTAL>			
X001	1-781-174-21	VIBRATOR, CERAMIC			
X301	1-781-134-21	VIBRATOR, CRYSTAL			
X302	1-781-132-21	VIBRATOR, CRYSTAL			

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REF. NO.	PART NO.	DESCRIPTION			REMARK
*	A-1136-184-A	B BOARD COMPLETE (KV-XA25M60)			
*	A-1136-198-A	B BOARD COMPLETE (KV-XA25M63)			
*	A-1136-160-A	B BOARD COMPLETE (KV-XA25N90)			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C1305	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1307	1-164-346-11	CERAMIC CHIP	1UF		16V
C1310	1-104-664-11	ELECT	47UF	20.00%	16V
C1312	1-104-664-11	ELECT	47UF	20.00%	16V
C1330	1-126-964-11	ELECT	10UF	20.00%	50V
C1333	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1395	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1401	1-104-661-91	ELECT	330UF	20.00%	16V
C1402	1-104-664-11	ELECT	47UF	20.00%	25V
C1403	1-104-664-11	ELECT	47UF	20.00%	25V
C1404	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1405	1-104-664-11	ELECT	47UF	20.00%	25V
C1406	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C1408	1-126-964-11	ELECT	10UF	20.00%	50V
C1410	1-104-664-11	ELECT	47UF	20.00%	25V
C1411	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1413	1-126-935-11	ELECT	470UF	20.00%	16V
C1414	1-164-346-11	CERAMIC CHIP	1UF		16V
C1415	1-104-664-11	ELECT	47UF	20.00%	25V
C1416	1-164-346-11	CERAMIC CHIP	1UF		16V
C1418	1-163-031-11	CERAMIC CHIP	0.01UF		50V
C1419	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C1421	1-164-346-11	CERAMIC CHIP	1UF		16V
C1422	1-164-346-11	CERAMIC CHIP	1UF		16V
C1423	1-164-346-11	CERAMIC CHIP	1UF		16V
C1425	1-164-346-11	CERAMIC CHIP	1UF		16V
C1426	1-164-346-11	CERAMIC CHIP	1UF		16V
C1428	1-104-665-11	ELECT	100UF	20.00%	25V
C1429	1-104-663-11	ELECT	33UF	20.00%	25V
C1431	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1432	1-126-933-11	ELECT	100UF	20.00%	16V
C1433	1-104-664-11	ELECT	47UF	20.00%	16V
C1434	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1435	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1436	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1439	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1440	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1441	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1442	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1443	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1444	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1445	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1446	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1447	1-126-964-11	ELECT	10UF	20.00%	50V
C1448	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1449	1-126-933-11	ELECT	100UF	20.00%	16V
C1457	1-164-346-11	CERAMIC CHIP	1UF		16V
C1459	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C1460	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1461	1-164-346-11	CERAMIC CHIP	1UF		16V
C1462	1-164-346-11	CERAMIC CHIP	1UF		16V
C1464	1-126-933-11	ELECT	100UF	20.00%	16V
C3201	1-126-964-11	ELECT	10UF	20.00%	50V
C3202	1-136-171-00	FILM	0.33UF	5.00%	50V
		(KV-XA25M60/XA25N90)			
C3203	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C3208	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C3209	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C3210	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C3211	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C3213	1-104-665-11	ELECT	100UF	20.00%	25V
C3214	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C3215	1-126-964-11	ELECT	10UF	20.00%	50V
C3216	1-126-964-11	ELECT	10UF	20.00%	50V
C3217	1-104-665-11	ELECT	100UF	20.00%	25V
C3218	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C3219	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C3220	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3221	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3222	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3223	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C3224	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C3225	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C3226	1-126-964-11	ELECT	10UF	20.00%	50V
C3227	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C3228	1-107-698-11	ELECT	10UF	20.00%	25V
C3229	1-107-698-11	ELECT	10UF	20.00%	25V
C3230	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C3231	1-126-960-11	ELECT	1UF	20.00%	50V
C3232	1-126-960-11	ELECT	1UF	20.00%	50V
C3233	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C3234	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C3235	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C3236	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3237	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C3238	1-164-005-11	CERAMIC CHIP	0.47UF		25V
		(KV-XA25M60/XA25N90)			
C3239	1-136-171-00	FILM	0.33UF	5.00%	50V
		(KV-XA25M60/XA25N90)			
C3240	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3241	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3242	1-126-965-11	ELECT	22UF	20.00%	50V
C3243	1-163-989-11	CERAMIC CHIP	0.033UF	10.00%	25V
		(KV-XA25M60/XA25N90)			
C3240	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3244	1-164-346-11	CERAMIC CHIP	1UF		16V
		(KV-XA25M60/XA25N90)			
C3245	1-164-005-11	CERAMIC CHIP	0.47UF	25V	
		(KV-XA25M60/XA25N90)			
C3246	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
		(KV-XA25M60/XA25N90)			
C3247	1-126-963-11	ELECT	4.7UF	20.00%	50V
		(KV-XA25M60/XA25N90)			
C3248	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
		(KV-XA25M60/XA25N90)			
C3249	1-216-295-11	SHORT	0 (KV-XA25M63)		

REF. NO.	PART NO.	DESCRIPTION			REMARK
C3249	1-164-505-11	CERAMIC CHIP	2.2UF		16V
		(KV-XA25M60/XA25N90)			
C3250	1-164-346-11	CERAMIC CHIP	1UF		16V
		(KV-XA25M60/XA25N90)			
C3251	1-126-964-11	ELECT	10UF	20.00%	50V
		(KV-XA25M60/XA25N90)			
C3252	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
		(KV-XA25M60/XA25N90)			
C3253	1-126-933-11	ELECT	100UF	20.00%	16V
		(KV-XA25M60/XA25N90)			
C3254	1-216-295-11	SHORT	0		
C3255	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
		(KV-XA25M60/XA25N90)			
C3256	1-126-963-11	ELECT	4.7UF	20.00%	50V
		(KV-XA25M60/XA25N90)			
C3257	1-164-346-11	CERAMIC CHIP	1UF		16V
		(KV-XA25M60/XA25N90)			
C3258	1-163-989-11	CERAMIC CHIP	0.033UF	10.00%	25V
		(KV-XA25M60/XA25N90)			
C3259	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3260	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C3262	1-104-664-11	ELECT	47UF	20.00%	16V
C3264	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C3265	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C3266	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C3267	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V
C3268	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C3269	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C3270	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3271	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3272	1-104-665-11	ELECT	100UF	20.00%	25V
C3273	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C3274	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C3275	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3276	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3277	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V
C3280	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C3281	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6200	1-216-295-11	SHORT	0		
C6201	1-126-964-11	ELECT	10UF	20.00%	50V
		(KV-XA25M63 ONLY)			
C6202	1-128-550-11	ELECT	2200UF	20.00%	50V
C6203	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6204	1-128-550-11	ELECT	2200UF	20.00%	50V
C6205	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C6206	1-128-550-11	ELECT	2200UF	20.00%	50V
C6207	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
		(KV-XA25M63 ONLY)			
C6208	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
		(KV-XA25M63 ONLY)			
C6209	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C6210	1-126-924-11	ELECT	330UF	20.00%	10V
C6211	1-126-924-11	ELECT	330UF	20.00%	10V
C6212	1-104-664-11	ELECT	47UF	20.00%	25V
C6213	1-126-964-11	ELECT	10UF	20.00%	50V
C6215	1-126-933-11	ELECT	100UF	20.00%	16V
		(KV-XA25M63 ONLY)			
C6216	1-126-960-11	ELECT	1UF	20.00%	50V
		(KV-XA25M63 ONLY)			

B

REF. NO.	PART NO.	DESCRIPTION	REMARK
C6217	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V	
C6218	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V (KV-XA25M63 ONLY)	
C6219	1-126-961-11	ELECT 2.2UF 20.00% 50V (KV-XA25M63 ONLY)	
C6220	1-164-505-11	CERAMIC CHIP 2.2UF 16V	
C6221	1-126-959-11	ELECT 0.47UF 20.00% 50V (KV-XA25M63 ONLY)	
C6222	1-164-505-11	CERAMIC CHIP 2.2UF 16V	
C6223	1-126-960-11	ELECT 1UF 20.00% 50V	
C6225	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V (KV-XA25M63 ONLY)	
C6226	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V (KV-XA25M63 ONLY)	
C6227	1-128-550-11	ELECT 2200UF 20.00% 50V (KV-XA25M63 ONLY)	
C6228	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V (KV-XA25M63 ONLY)	
C6229	1-164-505-11	CERAMIC CHIP 2.2UF 16V (KV-XA25M63 ONLY)	
C6230	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V (KV-XA25M63 ONLY)	
C6231	1-128-550-11	ELECT 2200UF 20.00% 50V (KV-XA25M63 ONLY)	
C6232	1-163-275-11	CERAMIC CHIP 0.001UF 5.00% 50V (KV-XA25M63 ONLY)	
C6233	1-163-007-11	CERAMIC CHIP 680PF 10.00% 50V (KV-XA25M63 ONLY)	
C6234	1-163-017-00	CERAMIC CHIP 0.0047UF 10.00% 50V (KV-XA25M63 ONLY)	
C6235	1-163-251-11	CERAMIC CHIP 100PF 5.00% 50V (KV-XA25M63 ONLY)	
C6236	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V (KV-XA25M63 ONLY)	
C6237	1-136-177-00	FILM 1UF 5.00% 50V (KV-XA25M63 ONLY)	
C6238	1-163-009-11	CERAMIC CHIP 0.001UF 10.00% 50V (KV-XA25M63 ONLY)	
C6239	1-127-682-51	ELECT MELF 2200UF 20% 25V (KV-XA25M63 ONLY)	
C6240	1-130-495-00	MYLAR 0.1UF 5.00% 50V (KV-XA25M63 ONLY)	
C6241	1-126-964-11	ELECT 10UF 20.00% 50V	
C6244	1-164-161-11	CERAMIC CHIP 0.0022UF 10.00% 50V	
C6245	1-164-161-11	CERAMIC CHIP 0.0022UF 10.00% 50V	
C6249	1-216-295-11	SHORT 0	
C6251	1-126-965-11	ELECT 22UF 20.00% 50V (KV-XA25M63 ONLY)	
C6252	1-126-965-11	ELECT 22UF 20.00% 50V (KV-XA25M63 ONLY)	
C6253	1-126-959-11	ELECT 0.47UF 20.00% 50V (KV-XA25M63 ONLY)	
		<CONNECTOR>	
CN1300*	1-564-506-11	PLUG, CONNECTOR 3P	
CN1400*	1-564-512-11	PLUG, CONNECTOR 9P	
CN1401*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN1403*	1-564-506-11	PLUG, CONNECTOR 3P	
CN1405*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P	
CN1406*	1-779-892-11	CONNECTOR, BOARD TO BOARD 10P	
CN1407*	1-779-891-11	CONNECTOR, BOARD TO BOARD 8P	
CN1409	1-764-818-11	CONNECTOR, BOARD TO BOARD 10P	
CN6200*	1-564-507-11	PLUG, CONNECTOR 4P	
CN6202*	1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M63 ONLY)	
CN6204*	1-564-509-11	PLUG, CONNECTOR 6P	
CN6205*	1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M63 ONLY)	
CN6206*	1-564-508-11	PLUG, CONNECTOR 5P	
		<DIODE>	
D1401	8-719-069-60	UDZS-TE17-9.1B	
D1402	8-719-069-60	UDZS-TE17-9.1B	
D1403	8-719-069-60	UDZS-TE17-9.1B	
D1404	8-719-069-60	UDZS-TE17-9.1B	
D1405	8-719-069-60	UDZS-TE17-9.1B	
D1406	8-719-069-60	UDZS-TE17-9.1B	
D1407	8-719-069-60	UDZS-TE17-9.1B	
D1408	8-719-069-60	UDZS-TE17-9.1B	
D1409	8-719-069-60	UDZS-TE17-9.1B	
D1410	8-719-069-60	UDZS-TE17-9.1B	
D1411	8-719-069-60	UDZS-TE17-9.1B	
D1412	8-719-069-60	UDZS-TE17-9.1B	
D1415	8-719-069-60	UDZS-TE17-9.1B	
D1416	8-719-069-60	UDZS-TE17-9.1B	
D1418	8-719-069-60	UDZS-TE17-9.1B	
D3201	8-719-988-61	1SS355TE-17 (KV-XA25M60/XA25N90)	
D3203	8-719-988-61	1SS355TE-17 (KV-XA25M60/XA25N90)	
D6200	8-719-109-86	RD5.1ES-B3 (KV-XA25M63 ONLY)	
D6205	8-719-988-61	1SS355TE-17 (KV-XA25M63 ONLY)	
D6210	8-719-914-42	DA204K	
D6211	8-719-016-74	1SS352 (KV-XA25M60/XA25M63)	
D6211	8-719-073-01	MA111-(K8).S0 (KV-XA25N90)	
D6212	8-719-016-74	1SS352 (KV-XA25M60/XA25M63)	
D6212	8-719-073-01	MA111-(K8).S0 (KV-XA25N90)	
		<FERRITE BEAD>	
FB6201	1-410-397-21	FERRITE 1.1UH (KV-XA25M63 ONLY)	
FB6202	1-410-397-21	FERRITE 1.1UH (KV-XA25M63 ONLY)	
		<IC>	
IC1401	8-752-068-46	CXA1855S	
IC1402	8-759-100-96	UPC4558G2	
IC1404	8-759-701-59	NJM78M09FA	
IC3200	8-759-100-96	UPC4558G2	
IC3201	8-759-689-71	NJM2188M-TE2	
IC3202	8-759-100-96	UPC4558G2	
IC3203	8-759-711-10	NJU4066BM	
IC3204	8-759-100-96	UPC4558G2 (KV-XA25M60/XA25N90)	
IC3205	8-752-058-68	CXA1315M	
IC3206	8-759-690-57	BH3868BFS-E2	
IC6200	8-759-168-24	TA8200AH	
IC6201	8-759-553-45	TDA7481 (KV-XA25M63 ONLY)	

B

REF. NO.	PART NO.	DESCRIPTION		REMARK
		<JACK>		
J1401	1-784-646-11	TERMINAL, S		
J1402	1-778-387-11	JACK BLOCK, PIN 12P		
		<CHIP CONDUCTOR>		
JR1303	1-216-295-11	SHORT	0	
JR1405	1-216-295-11	SHORT	0	
JR1406	1-216-295-11	SHORT	0	
JR1407	1-216-295-11	SHORT	0	
JR1409	1-216-295-11	SHORT	0	
JR1410	1-216-295-11	SHORT	0	
JR1411	1-216-295-11	SHORT	0	
JR3202	1-216-295-11	SHORT	0	
JR3204	1-216-295-11	SHORT	0	
JR3209	1-216-295-11	SHORT	0	
JR3210	1-216-295-11	SHORT	0	
JR3211	1-216-295-11	SHORT	0	
JR3212	1-216-295-11	SHORT	0	
JR6200	1-216-295-11	SHORT	0	
JR6202	1-216-295-11	SHORT	0	
JR6203	1-216-295-11	SHORT	0	
JR6204	1-216-295-11	SHORT	0	
JR6206	1-216-295-11	SHORT	0	
		<COIL>		
L1313	1-414-187-11	INDUCTOR	47UH	
L1314	1-414-856-11	INDUCTOR	10UH	
L1315	1-414-856-11	INDUCTOR	10UH	
L1317	1-414-856-11	INDUCTOR	10UH	
L1404	1-412-537-31	INDUCTOR	100UH	
L3202	1-414-856-11	INDUCTOR	10UH	
L6202	1-416-857-11	INDUCTOR	65UH (KV-XA25M63 ONLY)	
		<IC LINK>		
PS6200	1-532-686-21	LINK, IC 2.7A/150V (KV-XA25M63 ONLY)		
PS6201	1-532-686-21	LINK, IC 2.7A/150V (KV-XA25M63 ONLY)		
		<TRANSISTOR>		
Q1316	8-729-216-22	2SA1162-G		
Q1317	8-729-230-49	2SC2712-YG		
Q1318	8-729-230-49	2SC2712-YG		
Q1323	8-729-230-49	2SC2712-YG		
Q1324	8-729-230-49	2SC2712-YG		
Q1365	8-729-230-49	2SC2712-YG		
Q1372	8-729-230-49	2SC2712-YG		
Q1402	8-729-216-22	2SA1162-G		
Q1403	8-729-230-49	2SC2712-YG		
Q1404	8-729-230-49	2SC2712-YG		
Q1408	8-729-230-49	2SC2712-YG		
Q1409	8-729-230-49	2SC2712-YG		
Q3201	8-729-224-62	2SK246-GR (KV-XA25M60/XA25N90)		
Q3202	8-729-230-49	2SC2712-YG (KV-XA25M60/XA25N90)		
Q3203	8-729-230-49	2SC2712-YG		
Q3204	8-729-224-62	2SK246-GR (KV-XA25M60/XA25N90)		
Q6200	8-729-216-22	2SA1162-G (KV-XA25M63 ONLY)		
Q6201	1-801-806-11	TR DTC144EKA (KV-XA25M60/XA25M63)		
Q6201	8-729-421-19	UN2213 (KV-XA25N90)		
Q6202	8-729-216-22	2SA1162-G (KV-XA25M63 ONLY)		
Q6203	1-801-806-11	TR DTC144EKA (KV-XA25M60/XA25M63)		
Q6203	8-729-421-19	UN2213 (KV-XA25N90)		
Q6204	1-801-806-11	TR DTC144EKA (KV-XA25M60/XA25M63)		
Q6204	8-729-421-19	UN2213 (KV-XA25N90)		
Q6205	8-729-216-22	2SA1162-G (KV-XA25M63 ONLY)		
Q6206	8-729-216-22	2SA1162-G (KV-XA25M63 ONLY)		
Q6207	8-729-224-62	2SK246-GR (KV-XA25M63 ONLY)		
Q6208	1-801-806-11	TR DTC144EKA (KV-XA25M60/XA25M63)		
Q6208	8-729-421-19	UN2213 (KV-XA25N90)		
Q6214	8-729-421-19	UN2213 (KV-XA25N90 ONLY)		
		<RESISTOR>		
R1301	1-216-041-00	RES-CHIP	470	5% 1/10W
R1318	1-216-033-00	RES-CHIP	220	5% 1/10W
R1320	1-216-081-00	RES-CHIP	22K	5% 1/10W
R1343	1-216-049-11	RES-CHIP	1K	5% 1/10W
R1344	1-216-025-11	RES-CHIP	100	5% 1/10W
R1345	1-216-041-00	RES-CHIP	470	5% 1/10W
R1346	1-216-041-00	RES-CHIP	470	5% 1/10W
R1347	1-216-025-11	RES-CHIP	100	5% 1/10W
R1350	1-216-085-00	RES-CHIP	33K	5% 1/10W
R1359	1-216-025-11	RES-CHIP	100	5% 1/10W
R1360	1-216-041-00	RES-CHIP	470	5% 1/10W
R1361	1-216-041-00	RES-CHIP	470	5% 1/10W
R1362	1-216-055-00	RES-CHIP	1.8K	5% 1/10W
R1363	1-216-033-00	RES-CHIP	220	5% 1/10W
R1364	1-216-089-11	RES-CHIP	47K	5% 1/10W
R1365	1-216-081-00	RES-CHIP	22K	5% 1/10W
R1366	1-216-295-11	SHORT	0	
R1368	1-216-049-11	RES-CHIP	1K	5% 1/10W
R1369	1-216-025-11	RES-CHIP	100	5% 1/10W
R1370	1-216-041-00	RES-CHIP	470	5% 1/10W
R1371	1-216-039-00	RES-CHIP	390	5% 1/10W
R1372	1-216-041-00	RES-CHIP	470	5% 1/10W
R1397	1-216-045-00	RES-CHIP	680	5% 1/10W
R1400	1-216-105-91	RES-CHIP	220K	5% 1/10W
R1403	1-216-033-00	RES-CHIP	220	5% 1/10W
R1404	1-216-295-11	SHORT	0	
R1406	1-216-013-00	RES-CHIP	33	5% 1/10W
R1407	1-216-033-00	RES-CHIP	220	5% 1/10W
R1408	1-216-031-00	RES-CHIP	180	5% 1/10W
R1409	1-216-105-91	RES-CHIP	220K	5% 1/10W
R1410	1-216-105-91	RES-CHIP	220K	5% 1/10W
R1411	1-216-089-11	RES-CHIP	47K	5% 1/10W
R1412	1-216-089-11	RES-CHIP	47K	5% 1/10W
R1413	1-216-105-91	RES-CHIP	220K	5% 1/10W
R1414	1-216-025-11	RES-CHIP	100	5% 1/10W

B

REF. NO.	PART NO.	DESCRIPTION			REMARK
R1417	1-216-025-11	RES-CHIP	100	5%	1/10W
R1418	1-216-025-11	RES-CHIP	100	5%	1/10W
R1421	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1424	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1425	1-216-047-91	RES-CHIP	820	5%	1/10W
R1426	1-216-025-11	RES-CHIP	100	5%	1/10W
R1427	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R1428	1-216-025-11	RES-CHIP	100	5%	1/10W
R1429	1-216-089-11	RES-CHIP	47K	5%	1/10W
R1430	1-216-025-11	RES-CHIP	100	5%	1/10W
R1431	1-216-025-11	RES-CHIP	100	5%	1/10W
R1432	1-216-041-00	RES-CHIP	470	5%	1/10W
R1433	1-216-025-11	RES-CHIP	100	5%	1/10W
R1435	1-216-022-00	RES-CHIP	75	5%	1/10W
R1436	1-216-025-11	RES-CHIP	100	5%	1/10W
R1437	1-216-022-00	RES-CHIP	75	5%	1/10W
R1438	1-216-025-11	RES-CHIP	100	5%	1/10W
R1439	1-216-295-11	SHORT	0		
R1441	1-216-025-11	RES-CHIP	100	5%	1/10W
R1442	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1443	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1444	1-216-089-11	RES-CHIP	47K	5%	1/10W
R1445	1-216-025-11	RES-CHIP	100	5%	1/10W
R1446	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1447	1-216-025-11	RES-CHIP	100	5%	1/10W
R1448	1-216-043-91	RES-CHIP	560	5%	1/10W
R1449	1-249-429-11	CARBON	10K	5%	1/4W
R1450	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1451	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1452	1-216-089-11	RES-CHIP	47K	5%	1/10W
R1453	1-216-025-11	RES-CHIP	100	5%	1/10W
R1454	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1455	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1456	1-216-113-00	RES-CHIP	470K	5%	1/10W
R1457	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1458	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1459	1-216-025-11	RES-CHIP	100	5%	1/10W
R1460	1-216-033-00	RES-CHIP	220	5%	1/10W
R1461	1-216-025-11	RES-CHIP	100	5%	1/10W
R1463	1-249-429-11	CARBON	10K	5%	1/4W
R1464	1-216-113-00	RES-CHIP	470K	5%	1/10W
R1465	1-216-113-00	RES-CHIP	470K	5%	1/10W
R1466	1-216-033-00	RES-CHIP	220	5%	1/10W
R1467	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1468	1-216-093-91	RES-CHIP	68K	5%	1/10W
R1469	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1470	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1471	1-216-022-00	RES-CHIP	75	5%	1/10W
R1472	1-216-033-00	RES-CHIP	220	5%	1/10W
R1473	1-216-033-00	RES-CHIP	220	5%	1/10W
R1475	1-216-089-11	RES-CHIP	47K	5%	1/10W
R1476	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1477	1-216-047-91	RES-CHIP	820	5%	1/10W
R1478	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R1479	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1480	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1481	1-216-022-00	RES-CHIP	75	5%	1/10W
R1482	1-216-025-11	RES-CHIP	100	5%	1/10W
R1483	1-216-025-11	RES-CHIP	100	5%	1/10W
R1484	1-216-025-11	RES-CHIP	100	5%	1/10W
R1485	1-216-025-11	RES-CHIP	100	5%	1/10W
R1486	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R1487	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1488	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1489	1-216-022-00	RES-CHIP	75	5%	1/10W
R1490	1-216-025-11	RES-CHIP	100	5%	1/10W
R1491	1-216-025-11	RES-CHIP	100	5%	1/10W
R1492	1-216-021-00	RES-CHIP	68	5%	1/10W
R1493	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R1496	1-216-041-00	RES-CHIP	470	5%	1/10W
R1497	1-216-041-00	RES-CHIP	470	5%	1/10W
R1498	1-216-025-11	RES-CHIP	100	5%	1/10W
R1499	1-216-025-11	RES-CHIP	100	5%	1/10W
R1500	1-216-025-11	RES-CHIP	100	5%	1/10W
R1501	1-216-045-00	RES-CHIP	680	5%	1/10W
R1503	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1504	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1505	1-216-022-00	RES-CHIP	75	5%	1/10W
R1506	1-216-033-00	RES-CHIP	220	5%	1/10W
R3200	1-216-121-11	RES-CHIP (KV-XA25M60/XA25N90)	1M	5%	1/10W
R3201	1-216-121-11	RES-CHIP (KV-XA25M60/XA25N90)	1M	5%	1/10W
R3202	1-216-097-11	RES-CHIP (KV-XA25M60/XA25N90)	100K	5%	1/10W
R3203	1-216-121-11	RES-CHIP (KV-XA25M60/XA25N90)	1M	5%	1/10W
R3204	1-216-061-00	RES-CHIP (KV-XA25M60/XA25N90)	3.3K	5%	1/10W
R3205	1-216-069-00	RES-CHIP (KV-XA25M60/XA25N90)	6.8K	5%	1/10W
R3206	1-216-039-00	RES-CHIP (KV-XA25M60/XA25N90)	390	5%	1/10W
R3207	1-216-073-00	RES-CHIP (KV-XA25M60/XA25N90)	10K	5%	1/10W
R3208	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R3209	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3210	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R3211	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3212	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R3213	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R3214	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R3215	1-216-095-00	RES-CHIP	82K	5%	1/10W
R3216	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R3217	1-216-085-00	RES-CHIP	33K	5%	1/10W
R3218	1-216-091-00	RES-CHIP	56K	5%	1/10W
R3219	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3220	1-216-097-11	RES-CHIP (KV-XA25M60/XA25N90)	100K	5%	1/10W
R3221	1-216-073-00	RES-CHIP (KV-XA25M60/XA25N90)	10K	5%	1/10W
R3222	1-216-073-00	RES-CHIP (KV-XA25M60/XA25N90)	10K	5%	1/10W
R3223	1-216-045-00	RES-CHIP (KV-XA25M60/XA25N90)	680	5%	1/10W
R3224	1-216-101-00	RES-CHIP	150K	5%	1/10W
R3225	1-216-053-00	RES-CHIP	1.5K	5%	1/10W

B

REF. NO.	PART NO.	DESCRIPTION			REMARK
R3226	1-216-095-00	RES-CHIP	82K	5%	1/10W
R3227	1-216-091-00	RES-CHIP	56K	5%	1/10W
R3228	1-216-085-00	RES-CHIP	33K	5%	1/10W
R3229	1-216-025-11	RES-CHIP	100	5%	1/10W
R3230	1-216-025-11	RES-CHIP	100	5%	1/10W
R3231	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3232	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3233	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3234	1-216-039-00	RES-CHIP	390	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3235	1-216-101-00	RES-CHIP	150K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3236	1-216-113-00	RES-CHIP	470K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3237	1-216-045-00	RES-CHIP	680	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3238	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3239	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3240	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3241	1-216-093-91	RES-CHIP	68K	5%	1/10W
R3242	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3243	1-216-121-11	RES-CHIP	1M	5%	1/10W
R3244	1-216-121-11	RES-CHIP	1M	5%	1/10W
R3238	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3245	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3246	1-216-045-00	RES-CHIP	680	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3247	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3248	1-216-025-11	RES-CHIP	100	5%	1/10W
R3249	1-216-025-11	RES-CHIP	100	5%	1/10W
R3251	1-216-101-00	RES-CHIP	150K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3252	1-216-113-00	RES-CHIP	470K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3253	1-216-045-00	RES-CHIP	680	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3254	1-216-073-00	RES-CHIP	10K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3255	1-216-121-11	RES-CHIP	1M	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3256	1-216-121-11	RES-CHIP	1M	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3257	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3258	1-216-121-11	RES-CHIP	1M	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3259	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
		(KV-XA25M60/XA25N90)			
R3262	1-216-101-00	RES-CHIP	150K	5%	1/10W
R3263	1-216-093-91	RES-CHIP	68K	5%	1/10W
R3267	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3268	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3269	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3271	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R3273	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3274	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R3275	1-216-295-11	SHORT	0 (KV-XA25M63 ONLY)		
R3276	1-216-295-11	SHORT	0 (KV-XA25M63 ONLY)		
R6200	1-216-089-11	RES-CHIP	47K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6201	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6202	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6203	1-216-295-11	SHORT	0		
R6205	1-216-073-00	RES-CHIP	10K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6207	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6209	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6213	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6214	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6219	1-216-089-11	RES-CHIP	47K	5%	1/10W
R6235	1-216-029-00	RES-CHIP	150	5%	1/10W
		(KV-XA25M63 ONLY)			
R6236	1-216-075-00	RES-CHIP	12K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6237	1-216-089-11	RES-CHIP	47K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6239	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6240	1-249-429-11	CARBON	10K	5%	1/4W
		(KV-XA25M63 ONLY)			
R6241	1-215-890-11	METAL OXIDE	470	5%	2W
		(KV-XA25M63 ONLY)			
R6242	1-215-890-11	METAL OXIDE	470	5%	2W
		(KV-XA25M63 ONLY)			
R6243	1-249-392-11	CARBON	8.2	5%	1/4W
		(KV-XA25M63 ONLY)			
R6244	1-216-073-00	RES-CHIP	10K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6245	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6246	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6248	1-216-041-00	RES-CHIP	470	5%	1/10W
		(KV-XA25M63 ONLY)			
R6249	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6250	1-216-295-11	SHORT	0 (KV-XA25M63 ONLY)		
R6251	1-216-049-11	RES-CHIP	1K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6252	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6253	1-216-041-00	RES-CHIP	470	5%	1/10W
		(KV-XA25M63 ONLY)			
R6254	1-216-009-91	RES-CHIP	22	5%	1/10W
		(KV-XA25M63)			
R6254	1-216-021-00	RES-CHIP	68	5%	1/10W
		(KV-XA25M60/XA25N90)			
R6255	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R6256	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6257	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
		(KV-XA25M63 ONLY)			
R6258	1-216-021-00	RES-CHIP	68	5%	1/10W
		(KV-XA25M60/XA25N90)			
R6258	1-216-009-91	RES-CHIP	22	5%	1/10W
		(KV-XA25M63)			
R6259	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R6260	1-216-073-00	RES-CHIP	10K	5%	1/10W
		(KV-XA25M63 ONLY)			

B1

REF. NO.	PART NO.	DESCRIPTION			REMARK
R6262	1-216-059-00	RES-CHIP (KV-XA25M63 ONLY)	2.7K	5%	1/10W
R6263	1-216-059-00	RES-CHIP (KV-XA25M63 ONLY)	2.7K	5%	1/10W
R6266	1-216-089-11	RES-CHIP (KV-XA25M63 ONLY)	47K	5%	1/10W
R6268	1-216-065-91	RES-CHIP (KV-XA25M63 ONLY)	4.7K	5%	1/10W
R6278	1-216-295-11	SHORT	0		

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* A-1131-705-A B1 BOARD MOUNTED (KV-XA25M60/XA25M63)
* A-1131-652-A B1 BOARD MOUNTED (KV-XA25N90)
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<CAPACITOR>

C1513	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1514	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1515	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V
C1517	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1518	1-126-967-11	ELECT	47UF	20.00%	50V
C1519	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1520	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1522	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1523	1-163-255-11	CERAMIC CHIP	150PF	5.00%	50V
C1524	1-163-113-00	CERAMIC CHIP	68PF	5.00%	50V
C1525	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1526	1-163-249-11	CERAMIC CHIP	82PF	5.00%	50V
C1528	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1529	1-163-255-11	CERAMIC CHIP	150PF	5.00%	50V
C1530	1-163-113-00	CERAMIC CHIP	68PF	5.00%	50V
C1543	1-126-933-11	ELECT	100UF	20.00%	16V
C1544	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C1554	1-165-319-11	CERAMIC CHIP	0.1UF		50V
C1555	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1556	1-163-038-11	CERAMIC CHIP	0.1UF		25V

<CONNECTOR>

CN1501*	1-564-511-11	PLUG, CONNECTOR 8P
CN1502*	1-564-508-11	PLUG, CONNECTOR 5P
CN1503	1-764-811-11	CONNECTOR, BOARD TO BOARD 10P

<DIODE>

D1501	8-719-158-35	RD9.1S-B

<IC>

IC1502	8-759-439-64	HEF4053BT

<COIL>

L1501	1-414-856-11	INDUCTOR	10UH
L1506	1-414-857-11	INDUCTOR	100UH
L1507	1-414-187-11	INDUCTOR	47UH
L1508	1-414-187-11	INDUCTOR	47UH
L1509	1-414-857-11	INDUCTOR	100UH
L1510	1-414-187-11	INDUCTOR	47UH
L1511	1-414-187-11	INDUCTOR	47UH

<TRANSISTOR>

Q1501	8-729-230-49	2SC2712-YG
Q1502	8-729-216-22	2SA1162-G
Q1503	8-729-230-49	2SC2712-YG
Q1504	8-729-230-49	2SC2712-YG
Q1505	8-729-230-49	2SC2712-YG
Q1506	8-729-230-49	2SC2712-YG
Q1507	8-729-216-22	2SA1162-G
Q1509	8-729-230-49	2SC2712-YG
Q1510	8-729-230-49	2SC2712-YG
Q1511	8-729-216-22	2SA1162-G
Q1514	8-729-230-49	2SC2712-YG
Q1515	8-729-230-49	2SC2712-YG
Q1516	8-729-216-22	2SA1162-G
Q1520	8-729-230-49	2SC2712-YG
Q1522	8-729-230-49	2SC2712-YG
Q1523	8-729-216-22	2SA1162-G

<RESISTOR>

R1501	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1502	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1503	1-216-025-11	RES-CHIP	100	5%	1/10W
R1504	1-216-025-11	RES-CHIP	100	5%	1/10W
R1506	1-216-025-11	RES-CHIP	100	5%	1/10W
R1507	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1508	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1511	1-216-033-00	RES-CHIP	220	5%	1/10W
R1512	1-216-005-00	RES-CHIP	15	5%	1/10W
R1515	1-216-041-00	RES-CHIP	470	5%	1/10W
R1516	1-216-025-11	RES-CHIP	100	5%	1/10W
R1517	1-216-075-00	RES-CHIP	12K	5%	1/10W
R1520	1-216-079-00	RES-CHIP	18K	5%	1/10W
R1522	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1523	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1528	1-216-033-00	RES-CHIP	220	5%	1/10W
R1529	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1531	1-216-045-00	RES-CHIP	680	5%	1/10W
R1537	1-216-041-00	RES-CHIP	470	5%	1/10W
R1538	1-216-041-00	RES-CHIP	470	5%	1/10W
R1540	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1541	1-216-041-00	RES-CHIP	470	5%	1/10W
R1542	1-216-041-00	RES-CHIP	470	5%	1/10W
R1543	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1545	1-216-041-00	RES-CHIP	470	5%	1/10W
R1547	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1548	1-216-025-11	RES-CHIP	100	5%	1/10W
R1549	1-216-075-00	RES-CHIP	12K	5%	1/10W
R1551	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1552	1-216-049-11	RES-CHIP	1K	5%	1/10W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

B1 **C6**

REF. NO.	PART NO.	DESCRIPTION			REMARK
R1553	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1554	1-216-033-00	RES-CHIP	220	5%	1/10W
R1556	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1559	1-216-041-00	RES-CHIP	470	5%	1/10W
R1560	1-216-041-00	RES-CHIP	470	5%	1/10W
R1561	1-216-041-00	RES-CHIP	470	5%	1/10W
R1562	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1563	1-216-041-00	RES-CHIP	470	5%	1/10W
R1566	1-216-041-00	RES-CHIP	470	5%	1/10W
R1567	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1568	1-216-041-00	RES-CHIP	470	5%	1/10W
R1569	1-216-049-11	RES-CHIP	1K	5%	1/10W

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* A-1332-166-A C6 BOARD MOUNTED (KV-XA25M60/XA25M63)
* A-1332-147-A C6 BOARD MOUNTED (KV-XA25N90)
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4-352-844-01 PIN, LEAD, COATING
4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C701	1-162-114-00	CERAMIC	0.0047UF		2KV
C702	1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C708	1-102-114-00	CERAMIC	470PF	10.00%	50V
C709	1-102-114-00	CERAMIC	470PF	10.00%	50V
C710	1-102-114-00	CERAMIC	470PF	10.00%	50V
C712	1-102-115-00	CERAMIC	560PF	10.00%	50V
C713	1-102-112-00	CERAMIC	330PF	10.00%	50V
C714	1-102-113-00	CERAMIC	390PF	10.00%	50V
C716	1-126-933-11	ELECT	100UF	20.00%	16V
C717	1-107-651-11	ELECT	4.7UF	20.00%	250V
C1800	1-126-964-11	ELECT	10UF	20.00%	50V
C1803	1-126-964-11	ELECT	10UF	20.00%	50V
C1804	1-126-964-11	ELECT	10UF	20.00%	50V
C1809	1-126-942-61	ELECT	1000UF	20.00%	25V

<CONNECTOR>

CN700		1-695-915-11	TAB (CONTACT)
CN702		1-695-915-11	TAB (CONTACT)
CN703	*	1-564-509-11	PLUG, CONNECTOR 6P
CN704		1-695-915-11	TAB (CONTACT)
CN712	*	1-564-507-11	PLUG, CONNECTOR 4P
CN1801	*	1-564-509-11	PLUG, CONNECTOR 6P
CN1802	*	1-564-506-11	PLUG, CONNECTOR 3P

<DIODE>

D701	8-719-911-19	1SS119-25	
D702	8-719-911-19	1SS119-25	
D703	8-719-911-19	1SS119-25	
D704	8-719-911-19	1SS119-25	
D705	8-719-911-19	1SS119-25	
D706	8-719-911-19	1SS119-25	
D707	8-719-911-19	1SS119-25	
D708	8-719-911-19	1SS119-25	
D709	8-719-911-19	1SS119-25	
D710	8-719-911-19	1SS119-25	
D711	8-719-911-19	1SS119-25	
D712	8-719-911-19	1SS119-25	
D716	8-719-911-19	1SS119-25	
D717	8-719-929-15	HZS9.1NB2	
D1803	8-719-911-19	1SS119-25	
D1804	8-719-911-19	1SS119-25	
D1808	8-719-908-03	GP08D	

<IC>

IC1800	8-759-822-38	LA6510

<JACK>

J701	⚠	1-540-071-22	SOCKET, CRT

<COIL>

L701	1-410-667-31	INDUCTOR	22UH
L703	1-414-187-11	INDUCTOR	47UH
L705	1-414-186-31	INDUCTOR	33UH
L707	1-414-187-11	INDUCTOR	47UH

<TRANSISTOR>

Q701	8-729-326-11	2SC2611
Q702	8-729-326-11	2SC2611
Q703	8-729-326-11	2SC2611
Q704	8-729-326-11	2SC2611
Q705	8-729-326-11	2SC2611
Q706	8-729-326-11	2SC2611
Q707	8-729-200-17	2SA1091-O
Q708	8-729-200-17	2SA1091-O
Q709	8-729-200-17	2SA1091-O
Q710	8-729-119-78	2SC2785-HFE
Q711	8-729-119-78	2SC2785-HFE
Q712	8-729-119-78	2SC2785-HFE
Q714	8-729-255-12	2SC2551-O
Q1800	8-729-119-76	2SA1175-HFE
Q1802	8-729-119-78	2SC2785-HFE

<RESISTOR>

R701	1-249-496-11	CARBON	100K	5%	1/2W
R705	1-216-392-11	METAL OXIDE	1.8	5%	3W
R710	1-215-923-00	METAL OXIDE	10K	5%	3W
R711	1-260-330-11	CARBON	1.5K	5%	1/2W
R712	1-215-923-00	METAL OXIDE	10K	5%	3W
R713	1-260-330-11	CARBON	1.5K	5%	1/2W
R714	1-215-923-00	METAL OXIDE	10K	5%	3W
R715	1-260-330-11	CARBON	1.5K	5%	1/2W
R716	1-249-899-11	CARBON	100	5%	1/4W
R717	1-249-899-11	CARBON	100	5%	1/4W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

C6 F H

REF. NO.	PART NO.	DESCRIPTION			REMARK
R718	1-249-899-11	CARBON	100	5%	1/4W
R719	1-215-469-00	METAL	100K	1%	1/4W
R720	1-249-923-11	CARBON	1K	5%	1/4W
R722	1-249-923-11	CARBON	1K	5%	1/4W
R723	1-215-485-00	METAL	470K	1%	1/4W
R724	1-249-923-11	CARBON	1K	5%	1/4W
R725	1-249-424-11	CARBON	3.9K	5%	1/4W
R726	1-249-424-11	CARBON	3.9K	5%	1/4W
R727	1-249-424-11	CARBON	3.9K	5%	1/4W
R728	1-249-408-11	CARBON	180	5%	1/4W
R729	1-249-408-11	CARBON	180	5%	1/4W
R730	1-249-408-11	CARBON	180	5%	1/4W
R731	1-249-401-11	CARBON	47	5%	1/4W
R732	1-249-401-11	CARBON	47	5%	1/4W
R733	1-249-401-11	CARBON	47	5%	1/4W
R734	1-247-739-11	CARBON	100	5%	1/2W
R738	1-247-807-31	CARBON	100	5%	1/4W
R739	1-247-807-31	CARBON	100	5%	1/4W
R740	1-247-807-31	CARBON	100	5%	1/4W
R747	1-215-926-00	METAL OXIDE	33K	5%	3W
R749	1-215-927-00	METAL OXIDE	47K	5%	3W
R751	1-216-490-11	METAL OXIDE	39K	5%	3W
R753	1-249-429-11	CARBON	10K	5%	1/4W
R755	1-249-427-11	CARBON	6.8K	5%	1/4W
R756	1-249-427-11	CARBON	6.8K	5%	1/4W
R757	1-249-427-11	CARBON	6.8K	5%	1/4W
R758	1-249-419-11	CARBON	1.5K	5%	1/4W
R759	1-249-419-11	CARBON	1.5K	5%	1/4W
R760	1-249-419-11	CARBON	1.5K	5%	1/4W
R1800	1-249-417-11	CARBON	1K	5%	1/4W
R1801	1-249-426-11	CARBON	5.6K	5%	1/4W
R1802	1-249-387-11	CARBON	3.3	5%	1/4W
R1803	1-249-387-11	CARBON	3.3	5%	1/4W
R1805	1-249-429-11	CARBON	10K	5%	1/4W
R1806	1-249-425-11	CARBON	4.7K	5%	1/4W
R1808	1-249-425-11	CARBON	4.7K	5%	1/4W
R1809	1-249-435-11	CARBON	33K	5%	1/4W
R1810	1-249-435-11	CARBON	33K	5%	1/4W
R1811	1-249-435-11	CARBON	33K	5%	1/4W
R1812	1-249-435-11	CARBON	33K	5%	1/4W
R1821	1-249-435-11	CARBON	33K	5%	1/4W
R1822	1-249-435-11	CARBON	33K	5%	1/4W
R1823	1-249-426-11	CARBON	5.6K	5%	1/4W
R1824	1-249-435-11	CARBON	33K	5%	1/4W
R1825	1-247-843-11	CARBON	3.3K	5%	1/4W

<VARIABLE RESISTOR>

RV702	1-241-656-11	RES, ADJ, METAL FILM 110M
RV1801	1-223-241-11	RES, ADJ, CARBON 47K

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REF. NO.	PART NO.	DESCRIPTION			REMARK
	* A-1241-471-A	F BOARD MOUNTED (KV-XA25M60/XA25M63)			
	* A-1241-456-A	F BOARD MOUNTED (KV-XA25N90)			
		**********			
	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE (KV-XA25N90 ONLY)			
	1-533-223-11	CLIP, FUSE			
		<CAPACITOR>			
C654	1-117-703-11	CERAMIC	0.0047UF	99% 250V	
C4601 ⚠	1-104-708-11	MYLAR	0.47UF	20.00% 250V	
C4602 ⚠	1-109-835-11	MYLAR	0.68UF	20.00% 250V	
		<CONNECTOR>			
CN4601	1-580-843-11	PIN, CONNECTOR (POWER)			
CN4602	1-580-843-11	PIN, CONNECTOR (POWER)			
CN4603	1-695-915-11	TAB (CONTACT)			
		<FUSE>			
F4601 ⚠	1-532-299-00	FUSE, TIME-LAG 5A/250V			
		<RESISTOR>			
R4601 ⚠	1-202-719-00	SOLID	1M	10% 1/2W	
		<TRANSFORMER>			
T4601 ⚠	1-424-505-11	TRANSFORMER, LINE FILTER			
T4602 ⚠	1-431-182-11	TRANSFORMER, LINE FILTER			
		<VARISTOR>			
VDR461	1-801-451-51	VARISTOR TNR14V271K660 (KV-XA25N90 ONLY)			

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*	A-1372-945-A	H BOARD MOUNTED (KV-XA25M60)
*	A-1372-969-A	H BOARD MOUNTED (KV-XA25M63)
*	A-1372-966-A	H BOARD MOUNTED (KV-XA25N90)

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*	4-055-304-11	HOLDER, LED

<CAPACITOR>

C3900	1-136-153-00	FILM	0.01UF	5.00% 50V
C3902	1-136-153-00	FILM	0.01UF	5.00% 50V
C3904	1-104-664-11	ELECT	47UF	20.00% 25V
C3905	1-126-963-11	ELECT	4.7UF	20.00% 50V
C3906	1-126-963-11	ELECT	4.7UF	20.00% 50V

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

H J (KV-XA25M63)

REF. NO.	PART NO.	DESCRIPTION			REMARK
C3907	1-136-175-00	FILM (KV-XA25M63 ONLY)	0.68UF	5.00%	50V
C3910	1-104-664-11	ELECT	47UF	20.00%	16V
C3911	1-104-664-11	ELECT	47UF	20.00%	16V
C3912	1-102-114-00	CERAMIC	470PF	10.00%	50V
C3913	1-126-960-11	ELECT	1UF	20.00%	50V
		<CONNECTOR>			
CN3601*	1-580-844-11	PIN, CONNECTOR (POWER)			
CN3602*	1-580-844-11	PIN, CONNECTOR (POWER)			
CN3901*	1-564-507-11	PLUG, CONNECTOR 4P			
CN3902*	1-564-509-11	PLUG, CONNECTOR 6P			
CN3903*	1-564-507-11	PLUG, CONNECTOR 4P (KV-XA25M63 ONLY)			
CN3904*	1-564-512-11	PLUG, CONNECTOR 9P			
CN3905*	1-564-512-11	PLUG, CONNECTOR 9P			
CN3906*	1-564-506-11	PLUG, CONNECTOR 3P (KV-XA25M63 ONLY)			
		<DIODE>			
D3900	8-719-070-16	NNCD9.1A-T1			
D3901	8-719-070-16	NNCD9.1A-T1			
D3905	8-719-070-16	NNCD9.1A-T1			
D3906	8-719-045-19	SPB-26MVWF			
D3907	8-719-070-16	NNCD9.1A-T1			
D3908	8-719-070-16	NNCD9.1A-T1			
		<IC>			
IC3901	8-759-180-30	UPD6124G-212 (KV-XA25M60/XA25M63)			
IC3901	8-742-014-21	SBX1981-51(21) (KV-XA25N90)			
		<JACK>			
J3901	1-750-264-11	JACK			
J3902	1-784-646-11	TERMINAL, S			
J3903	1-770-329-11	JACK, PIN 3P			
		<COIL>			
L3901	1-414-183-41	INDUCTOR	10UH		
L3902	1-414-183-41	INDUCTOR	10UH		
L3903	1-406-976-11	INDUCTOR	68UH (KV-XA25M63 ONLY)		
		<TRANSISTOR>			
Q3901	8-729-030-02	DTC144ESA			
Q3902	8-729-030-02	DTC144ESA			
		<RESISTOR>			
R3900	1-249-411-11	CARBON	330	5%	1/4W
R3901	1-249-411-11	CARBON	330	5%	1/4W
R3902	1-247-804-11	CARBON	75	5%	1/4W
R3904	1-249-429-11	CARBON	10K	5%	1/4W
R3905	1-249-429-11	CARBON	10K	5%	1/4W
R3907	1-249-426-11	CARBON	5.6K	5%	1/4W
R3908	1-249-413-11	CARBON	470	5%	1/4W
R3909	1-249-417-11	CARBON	1K	5%	1/4W
R3910	1-249-420-11	CARBON	1.8K	5%	1/4W
R3911	1-249-411-11	CARBON	330	5%	1/4W
R3912	1-247-843-11	CARBON	3.3K	5%	1/4W
R3913	1-249-429-11	CARBON	10K	5%	1/4W
R3914	1-249-411-11	CARBON	330	5%	1/4W
R3915	1-249-429-11	CARBON	10K	5%	1/4W
R3916	1-249-401-11	CARBON	47	5%	1/4W
R3917	1-247-804-11	CARBON	75	5%	1/4W
R3918	1-249-409-11	CARBON	220	5%	1/4W
R3919	1-249-409-11	CARBON	220	5%	1/4W
R3920	1-247-807-31	CARBON	100	5%	1/4W
R3921	1-247-807-31	CARBON	100	5%	1/4W
R3922	1-249-421-11	CARBON	2.2K	5%	1/4W
		<SWITCH>			
S3601 ⚠	1-571-433-21	SWITCH, PUSH (AC POWER)			
S3902	1-692-431-21	SWITCH, TACTILE			
S3903	1-692-431-21	SWITCH, TACTILE			
S3904	1-692-431-21	SWITCH, TACTILE			
S3905	1-692-431-21	SWITCH, TACTILE			
S3906	1-692-431-21	SWITCH, TACTILE			
S3907	1-692-431-21	SWITCH, TACTILE			
S3908	1-692-431-21	SWITCH, TACTILE			

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* A-1388-315-A J BOARD MOUNTED (KV-XA25M63 ONLY)
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		<CAPACITOR>			
C2410	1-126-967-11	ELECT	47UF	20.00%	50V
C2411	1-126-967-11	ELECT	47UF	20.00%	50V
C2412	1-126-967-11	ELECT	47UF	20.00%	50V
C2413	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2414	1-102-112-00	CERAMIC	330PF	10.00%	50V
C2418	1-126-960-11	ELECT	1UF	20.00%	50V
C2419	1-126-960-11	ELECT	1UF	20.00%	50V
		<CONNECTOR>			
CN2410*	1-564-523-11	PLUG, CONNECTOR 8P			
CN3451*	1-564-518-11	PLUG, CONNECTOR 3P			
		<DIODE>			
D2410	8-719-070-16	NNCD9.1A-T1			
D2411	8-719-070-16	NNCD9.1A-T1			
D2412	8-719-070-16	NNCD9.1A-T1			
D2414	8-719-070-16	NNCD9.1A-T1			
D2415	8-719-070-16	NNCD9.1A-T1			

J (KV-XA25M63)

REF. NO.	PART NO.	DESCRIPTION			REMARK
D2415	8-719-929-15	HZS9.1NB2			
D3453	8-719-110-72	RD30ESB2			
D3454	8-719-110-72	RD30ESB2			
		<JACK>			
J2410	1-784-623-11	BLOCK, PIN JACK 5P			
J3451	1-694-467-11	TERMINAL, PUSH (2P)			
		<RESISTOR>			
R2410	1-247-804-11	CARBON	75	5% 1/4W	
R2411	1-247-804-11	CARBON	75	5% 1/4W	
R2412	1-247-804-11	CARBON	75	5% 1/4W	
R2414	1-247-887-00	CARBON	220K	5% 1/4W	
R2415	1-247-807-31	CARBON	100	5% 1/4W	
R2417	1-247-887-00	CARBON	220K	5% 1/4W	
R2418	1-247-807-31	CARBON	100	5% 1/4W	
R2419	1-249-409-11	CARBON	220	5% 1/4W	
R2420	1-249-409-11	CARBON	220	5% 1/4W	
R2421	1-249-409-11	CARBON	220	5% 1/4W	

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* A-1388-307-A J1 BOARD MOUNTED (KV-XA25M60)
* A-1388-301-A J1 BOARD MOUNTED (KV-XA25N90)
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		<CAPACITOR>			
C2410	1-126-967-11	ELECT	47UF	20.00% 50V	
C2411	1-126-967-11	ELECT	47UF	20.00% 50V	
C2412	1-126-967-11	ELECT	47UF	20.00% 50V	
C2413	1-102-112-00	CERAMIC	330PF	10.00% 50V	
C2414	1-102-112-00	CERAMIC	330PF	10.00% 50V	
C2418	1-126-960-11	ELECT	1UF	20.00% 50V	
C2419	1-126-960-11	ELECT	1UF	20.00% 50V	
		<CONNECTOR>			
CN2410 *	1-564-523-11	PLUG, CONNECTOR 8P			
		<DIODE>			
D2410	8-719-070-16	NNCD9.1A-T1 (KV-XA25M60)			
D2410	8-719-929-15	HZS9.1NB2 (KV-XA25N90)			
D2411	8-719-070-16	NNCD9.1A-T1 (KV-XA25M60)			
D2411	8-719-929-15	HZS9.1NB2 (KV-XA25N90)			
D2412	8-719-070-16	NNCD9.1A-T1 (KV-XA25M60)			
D2412	8-719-929-15	HZS9.1NB2 (KV-XA25N90)			
D2414	8-719-070-16	NNCD9.1A-T1 (KV-XA25M60)			
D2414	8-719-929-15	HZS9.1NB2 (KV-XA25N90)			
D2415	8-719-070-16	NNCD9.1A-T1 (KV-XA25M60)			
D2415	8-719-929-15	HZS9.1NB2 (KV-XA25N90)			

J1 (KV-XA25M60/XA25N90)

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<JACK>			
J2410	1-784-623-11	BLOCK, PIN JACK 5P			
		<RESISTOR>			
R2410	1-247-804-11	CARBON	75	5% 1/4W	
R2411	1-247-804-11	CARBON	75	5% 1/4W	
R2412	1-247-804-11	CARBON	75	5% 1/4W	
R2414	1-247-887-00	CARBON	220K	5% 1/4W	
R2415	1-247-807-31	CARBON	100	5% 1/4W	
R2417	1-247-887-00	CARBON	220K	5% 1/4W	
R2418	1-247-807-31	CARBON	100	5% 1/4W	
R2419	1-249-409-11	CARBON	220	5% 1/4W	
R2420	1-249-409-11	CARBON	220	5% 1/4W	
R2421	1-249-409-11	CARBON	220	5% 1/4W	

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* A-1342-602-A VM1 BOARD MOUNTED (KV-XA25M60/XA25M63)
* A-1342-590-A VM1 BOARD MOUNTED (KV-XA25N90)
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* 4-363-146-71 HEAT SINK, V.OUT (KV-XA25N90 ONLY)
4-382-854-11 SCREW (M3X10), P, SW (+)

		<CAPACITOR>			
C5900	1-102-115-00	CERAMIC	560PF	10.00% 50V	
C5902	1-104-661-91	ELECT	330UF	20.00% 16V	
C5903	1-161-830-00	CERAMIC	0.0047UF	500V	
C5905	1-126-935-11	ELECT	470UF	20.00% 10V	
C5906	1-130-491-00	MYLAR	0.047UF	5.00% 50V	
C5907	1-107-638-11	ELECT	33UF	20.00% 160V	
C5908	1-106-383-00	MYLAR	0.047UF	10.00% 200V	
C5909	1-126-933-11	ELECT	100UF	20.00% 16V	
C5910	1-130-471-00	MYLAR	0.001UF	5.00% 50V	
C5911	1-107-949-11	ELECT	2.2UF	20.00% 160V	
C5912	1-104-999-11	MYLAR	0.1UF	10.00% 200V	
C5913	1-130-471-00	MYLAR	0.001UF	5.00% 50V	
C5914	1-126-933-11	ELECT	100UF	20.00% 16V	
C5916	1-130-491-00	MYLAR	0.047UF	5.00% 50V	
C5917	1-126-935-11	ELECT	470UF	20.00% 10V	
C5918	1-102-244-00	CERAMIC	220PF	10.00% 500V	
C5919	1-136-165-00	FILM	0.1UF	5.00% 50V	
		<CONNECTOR>			
CN5901 *	1-564-510-11	PLUG, CONNECTOR 7P			
CN5904 *	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P			
		<DIODE>			
D5901	8-719-911-19	1SS119-25			
D5902	8-719-110-88	RD39ES-B2			
D5903	8-719-911-19	1SS119-25			

VM1

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

VM1

REF. NO.	PART NO.	DESCRIPTION			REMARK
D5904	8-719-110-88	RD39ES-B2			
D5905	8-719-911-19	1SS119-25			
D5906	1-249-406-11	CARBON	120	5%	1/4W
D5907	1-249-406-11	CARBON	120	5%	1/4W
		<COIL>			
L5901	1-414-187-11	INDUCTOR	47UH		
		<TRANSISTOR>			
Q5901	8-729-119-78	2SC2785-HFE (KV-XA25M60/XA25M63)			
Q5901	8-729-230-45	2SC2458-YGR (KV-XA25N90)			
Q5902	8-729-809-26	2SA1606-E			
Q5903	8-729-119-78	2SC2785-HFE (KV-XA25M60/XA25M63)			
Q5903	8-729-230-45	2SC2458-YGR (KV-XA25N90)			
Q5904	8-729-119-76	2SA1175-HFE			
Q5905	8-729-119-78	2SC2785-HFE (KV-XA25M60/XA25M63)			
Q5905	8-729-230-45	2SC2458-YGR (KV-XA25N90)			
Q5906	8-729-809-29	2SC4159-E			
Q5907	8-729-119-78	2SC2785-HFE (KV-XA25M60/XA25M63)			
Q5907	8-729-230-45	2SC2458-YGR (KV-XA25N90)			
		<RESISTOR>			
R5901	1-249-401-11	CARBON	47	5%	1/4W
R5902	1-249-414-11	CARBON	560	5%	1/4W
R5903	1-247-734-11	CARBON	39	5%	1/2W
R5904	1-249-411-11	CARBON	330	5%	1/4W
R5905	1-249-417-11	CARBON	1K	5%	1/4W
R5906	1-249-417-11	CARBON	1K	5%	1/4W
R5907	1-249-417-11	CARBON	1K	5%	1/4W
R5908	1-249-383-11	CARBON	1.5	5%	1/4W
R5909	1-249-409-11	CARBON	220	5%	1/4W
R5910	1-249-403-11	CARBON	68	5%	1/4W
R5911	1-249-439-11	CARBON	68K	5%	1/4W
R5912	1-249-437-11	CARBON	47K	5%	1/4W
R5914	1-249-403-11	CARBON	68	5%	1/4W
R5915	1-249-429-11	CARBON	10K	5%	1/4W
R5916	1-249-419-11	CARBON	1.5K	5%	1/4W
R5917	1-249-416-11	CARBON	820	5%	1/4W
R5918	1-249-429-11	CARBON	10K	5%	1/4W
R5919	1-249-417-11	CARBON	1K	5%	1/4W
R5920	1-249-439-11	CARBON	68K	5%	1/4W
R5921	1-216-476-11	METAL OXIDE	180	5%	3W
R5922	1-249-414-11	CARBON	560	5%	1/4W
R5923	1-249-383-11	CARBON	1.5	5%	1/4W
R5925	1-249-400-11	CARBON	39	5%	1/4W
R5927	1-249-416-11	CARBON	820	5%	1/4W
R5929	1-215-880-00	METAL OXIDE	10	5%	2W

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REF. NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS	
		**********	
	1-505-937-31	SPEAKER (10CM) (KV-XA25M63 ONLY)	
	1-900-703-04	LEAD ASSY, SPEAKER (KV-XA25M63 ONLY)	
⚠	1-419-322-31	COIL, DEGAUSSING (KV-XA25M60/XA25M63)	
⚠	1-419-086-21	COIL, DEGAUSSING (KV-XA25N90)	
⚠	1-451-475-11	DEFLECTION YOKE (Y25RSA)	
	1-452-094-00	CIRCULAR DISC MAGNET B	
	1-452-032-00	MAGNET,DISC	
	1-452-896-61	COIL, NA ROTATION (RT-200) (KV-XA25N90)	
	1-452-896-81	COIL, NA ROTATION (KV-XA25M60/XA25M63)	
	1-503-902-11	SPEAKER (15X6.5 CM)	
	1-529-190-11	SPEAKER (5CM)	
	1-573-657-21	PLUG, F-PIN (KV-XA25N90)	
⚠	1-575-023-11	CORD, POWER (WITH CONNECTOR) 6A/250V	
⚠	8-733-250-05	PICTURE TUBE (A60LPN70X)	
	8-453-011-21	NA299-S	

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ACCESSORIES AND PACKING MATERIALS
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	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
*	4-037-760-01	BAG, PROTECTION (KV-XA25M60/XA25M63)
*	4-029-168-01	BAG, PROTECTION (KV-XA25N90)
*	4-081-743-01	INDIVIDUAL CARTON (KV-XA25M60/XA25M63)
*	4-081-886-01	INDIVIDUAL CARTON (KV-XA25N90)
*	4-081-744-01	CUSHION (UPPER) (ASSY) (KV-XA25M60/XA25M63)
*	4-081-560-01	CUSHION (UPPER) (ASSY) (KV-XA25N90)
*	4-081-747-01	CUSHION (LOWER) (ASSY) (KV-XA25M60/XA25M63)
*	4-081-561-01	CUSHION (LOWER) (ASSY) (KV-XA25N90)
	4-080-174-11	MANUAL, INSTRUCTION (KV-XA25M60/XA25M63)
	4-080-574-11	MANUAL, INSTRUCTION (KV-XA25N90)
	4-392-003-21	BAND, HOLDING (KV-XA25M60/XA25M63)
	4-392-003-11	BAND, HOLD (KV-XA25N90)
	4-059-705-01	CLIP (KV-XA25M60/XA25M63)
	4-392-004-11	CLIP (KV-XA25N90)
	4-081-562-01	CUSHION (LEFT UPPER) FRONT (KV-XA25N90 ONLY)
	4-081-563-01	CUSHION (RIGHT UPPER) FRONT (KV-XA25N90 ONLY)
	4-081-564-01	CUSHION (LEFT UPPER) REAR (KV-XA25N90 ONLY)
	4-081-565-01	CUSHION (RIGHT UPPER) REAR (KV-XA25N90 ONLY)
	4-081-566-01	CUSHION (LEFT LOWER) FRONT (KV-XA25N90 ONLY)

VM1

REF. NO.	PART NO.	DESCRIPTION	REMARK
	4-081-567-01	CUSHION (RIGHT LOWER) FRONT (KV-XA25N90 ONLY)	
	4-081-568-01	CUSHION (LEFT LOWER) REAR (KV-XA25N90 ONLY)	
	4-081-569-01	CUSHION (RIGHT LOWER) REAR (KV-XA25N90 ONLY)	
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REF. NO.	PART NO.	DESCRIPTION	REMARK
		REMOTE COMMANDER	
	**********		
	1-418-038-12	REMOTE COMMANDER (RM-954) (KV-XA25M60/XA25M63)	
	1-418-460-11	REMOTE COMMANDER (RM-914) (KV-XA25N90)	
	9-933-895-01	BATTERY COVER REMOTE COMMANDER (KV-XA25N90)	
	4-080-852-01	BATTERY COVER, REMOTE COMMANDER (KV-XA25M60/XA25M63)	

Sony Corporation
Sony Technology Malaysia Sdn. Bhd.
Visual Entertainment General Area

9-872-242-01

English
2001BM70025-1
Printed in Malaysia
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